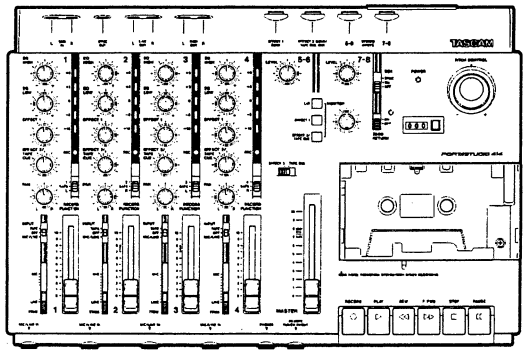


TASCAM
TEAC Professional Division

SERVICE MANUAL

414
PORTASTUDIO

NOTES

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB ass'y drawings contained in this manual.

* PC boards shown viewed from parts side.
* Parts marked with * require longer deliver time.
* ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components – refer to the TEAC Parts List and ensure exact replacement.
* Parts not shown in the parts lists, or parts, though listed, having no parts numbers, are not general "ready-to-supply" parts.
* Parts of [ ] mark can be used only with the version designated.
  [US/C]:U.S.A./CANADA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA
  [J]:JAPAN

注意

標準抵抗,コンデンサーは省略してあります。回路図および基板図を参照してください。

- ●プリント基板図は部品面が示されています。
- ●＊印の部品は納期が若干かかります。あらかじめご了承ください。
- ●⚠印は安全規格重要部品です。交換するときは必ずティアック指定の部品を使用してください。
- ●リストされていない部品は原則としてサービス供給部品として取扱っていません。
- ●仕向先
  [US/C]:U.S.A./CANADA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA
  [J]:JAPAN

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : October, 1996

D00298100A

1. SPECIFICATIONS

仕様

MECHANICAL

Type : Compact cassette (C-30 to C-90), High-Bias (CrO2)
Track Format : 4-track/4-channel
Head Configuration :
4-channel record/play head (permalloy) × 1
4-channel erase head (ferrite) × 1
Motor : DC servo motor × 1
Tape Speed : 9.5 cm/sec. (3-3/4 ips)
Pitch Control : ± 12% (approx.)
Wow and Flutter : 0.12% WRMS or less
Fast Winding Time : 110 sec.(approx.) with C-60

ELECTRONICS

Mixer Section

MIC/LINE INPUT, Ch.1-4
Input Impedance : 50k ohms
Nominal Input Level : -50 dBV (3 mV) (Trim Max.)
-10 dBV (0.3 V) (Trim Min.)
Maximum Input Level : +5 dBV (1.8 V) at Trim Min.

STEREO INPUT, Ch.5-6/ Ch.7-8 (1/4" phone jack x 2)
Input Impedance : 10 kohms
Nominal Input Level : -10 dBV (0.3 V)
Maximum Input Level : +5 dBV (1.8 V)

SUB INPUT (RCA jack x 2)
Input Impedance : 10 kohms
Nominal Input Level : -10 dBV (0.3 V)
Maximum Input Level : +5 dBV (1.8 V)

LINE OUTPUT (RCA jack x 2)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Maximum Output Level : +5 dBV (1.8 V)

EFFECT 1 SEND (1/4" phone jack)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Maximum Output Level : +5 dBV (1.8 V)

EFFECT 2 SEND/TAPE CUE OUT (1/4" phone jack)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)
Maximum Output Level : +5 dBV (1.8 V)

SYNC OUT (RCA jack x 1)
Output Impedance : 100 ohms
Nominal Output Level : -10 dBV (0.3 V)

MON OUT (RCA jack x 2)
Output Impedance : 600 ohms
Nominal Output Level : -10 dBV (0.3 V)
Maximum Output Level : +5 dBV (1.8 V)

PHONES (1/4" stereo phone jack x 1)
Nominal Load Impedance : 30 ohms
Maximum Output Level : 60 mW + 60 mW

Equalizer
HIGH (Shelving) : 10 kHz, ± 10 dB
LOW (Shelving) : 100 Hz, ± 10 dB

Frequency Response
MIC IN to LINE OUT : 20 Hz to 20 kHz, ± 3 dB
LINE IN to LINE OUT : 20 Hz to 20 kHz, ± 2 dB
LINE IN to MONITOR OUT : 20 Hz to 20 kHz, ± 3 dB
LINE IN to EFFECT SEND : 20 Hz to 20 kHz, ± 2 dB
LINE IN to PHONES : 40 Hz to 20 kHz, ± 3 dB

Signal-to-Noise Ratio (20 Hz to 20 kHz, B.P.F. inserted)
1 MIC IN to LINE OUT :
63 dB (at a nominal input level of -60 dBV)
4 MIC INs to LINE OUT :
58 dB (at a nominal input level of -60dBV)
1 LINE IN to LINE OUT :
70 dB (at a nominal input level of -10dBV)
4 LINE INs to LINE OUT :
65 dB (at a nominal input level of -10dBV)

Distortion
1 MIC IN to LINE OUT : 0.05% (at 1 kHz, 15 dB above nominal input level with 30 kHz-L.P.F. inserted)
1 LINE IN to LINE OUT : 0.05% (at 1 kHz, nominal input level with 30 kHz-L.P.F. inserted)

Crosstalk : 55 dB (at 1 kHz, nominal input level with 1 kHz-B.P.F. inserted)

Recorder Section

Record channel : 4-track single direction
Noise Reduction : dbx Type II
Overall Frequency Response :
40 Hz to 16 kHz, ± 3 dB (without dbx)
Overall Signal-to-Noise Ratio : 85 dB
(at 1 kHz, ref. to 3 % THD, "A" weighted, with dbx)
Total Harmonic Distortion : 1.0 %
(at 1 kHz, nominal input level, with dbx)
Channel Separation : 70 dB
(at 1 kHz, nominal input level, with dbx)
Erasure : 70 dB or better (at 1 kHz, B.P.F. inserted)

OTHERS

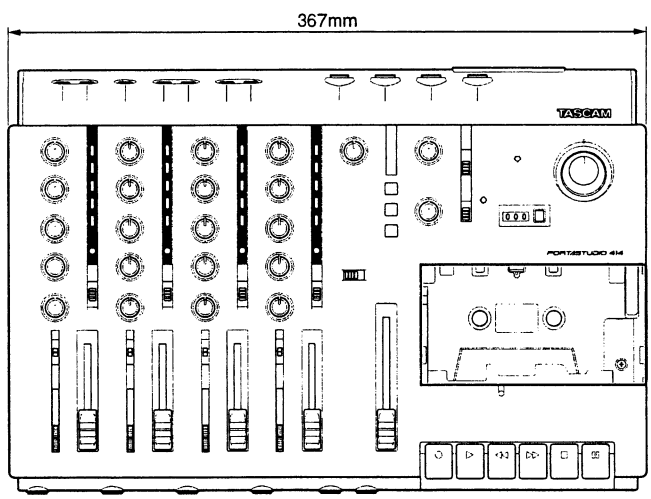
Power Requirements :
USA/CANADA : 120 V AC, 60 Hz
U.K./EUROPE : 230 V AC, 50 Hz
AUSTRALIA : 240 V AC, 50 Hz
JAPAN : 100 V AC, 50-60 Hz

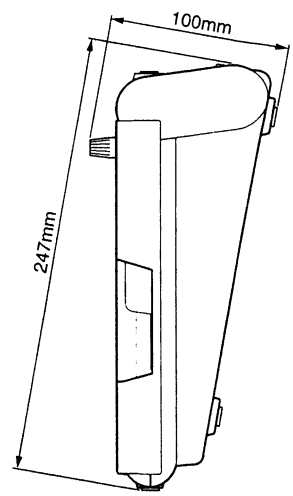
Power Consumption : 11W
Dimensions (W x H x D) :
367 × 100 × 247 mm (14-7/16″ × 3-15/16″ × 9-3/4″)
Weight (Net) : 2.1 kg (4-10/16 lbs.)

In these specifications, 0 dBV is referenced to 1 Volt. Actual voltage levels are also given in parenthesis (0.316 V for -10 dBV rounded off to 0.3 V).

* dbx is a registered trademark of dbx Incorporated.
* Changes in specifications and features may be made without notice or obligation.

* dbxおよびdbxマークはdbxインコーポレーテッドの登録商標です。
* dbxシステムはdbxインコーポレーテッドの実地権に基づいて製造されています。
*仕様および外観は、改善のため予告なく変更することがあります。





2. MECHANICAL CHECKS AND ADJUSTMENTS
機構部の確認と調整

2-1. Wow and flutter

1. Connect the wow and flutter meter to SYNC OUT.
2. The wow and flutter value when the test tape MXT-111 is played back should be within the standard given below :
   Standard : 0.2 % or less (WRMS)

2-1. ワウ・フラッタ

1. SYNC OUTにワウ・フラッタ・メータを接続する。
2. テスト・テープMXT-111を再生したときのワウ・フラッタ値は下記規格内であること。
   規格 : 0.2%以下 (WRMS)

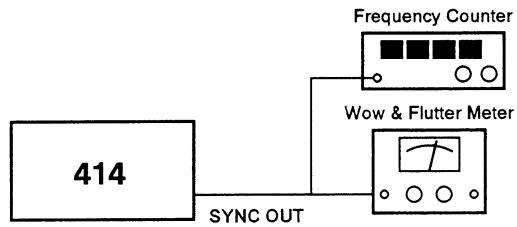


Fig. 2-1

2-2. Tape speed

1. Connect the frequency counter to SYNC OUT.
2. Set the PITCH CONTROL knob to the center position.
3. Turn the POWER switch ON, then play back the test tape. Leave the tape in this state for at least one minute, in order to let the capstan motor rotate and warm up.
4. Play back the middle portion of the test tape MXT-111, then adjust trimmer resistor R622 (Fig. 3-1) on the BOTTOM PCB till a frequency counter reading of 3000 Hz ± 5 Hz is reached.
5. After adjustment, check the following at both the beginning and the end of tape.
   Frequency reading : 3000 Hz ± 60 Hz

2-2. テープ・スピード

1. SYNC OUTに周波数カウンタを接続する。
2. PITCH CONTROLノブをセンターにセットする。
3. キャプスタン・モータを回転させウォーミング・アップさせるために、テスト・テープを装着し再生状態にして少なくとも1分間そのままにしておく。
4. テスト・テープMXT-111の中間部を再生したとき、周波数カウンタの値が3000Hz ± 5Hzになるように BOTTOM PCBの半固定抵抗R622 (図3-1) を調整する。
5. 調整後、テープの巻始めと巻終りで、次の値が得られるかを確認する。
   速度偏差 : 3000Hz ± 60Hz

2-3. Pitch control

After the tape speed has been adjusted, play back the test tape MXT-111, turn the PITCH CONTROL knob to the maximum and minimum positions so that the tape speed variations are as follows :
Standard : ± 10 % or more
(2700 Hz or less, 3300 Hz or more)

2-3. ピッチ・コントロール

テープ・スピード調整後、テスト・テープMXT-111を再生し、PITCH CONTROLノブを最大、最小に回したときのテープ・スピード可変幅は次の通りであること。
規格 : ± 10 %以上 (2700Hz以下、3300Hz以上)

2-4. Reel torque

1. Take-up torque/back tension torque
   The torque values when the test tape MTT-8111 for measuring torques is played back should be as follows:
   Take-up torque (right reel) : 30 to 65 g•cm
   Back tension torque (left reel) : 2 to 6 g•cm
2. FF/REW torque
   Load the test tape MTT-8242 for measuring torques, then measure the starting torque when the unit is in FF and REW operation. The standard values are as follows:
   Torque in FF mode (right reel) : 55 to 140 g•cm
   Torque in REW mode (left reel) : 55 to 140 g•cm

2-5. R/P head azimuth

1. Refer to Figure 2-2 and connect the channel 1 TAPE OUT to the vertical input of an oscilloscope, and connect the channel 4 TAPE OUT to the horizonal input of the scope.
2. Play the 315 Hz and 6.3 kHz signals on test tape MXT-1161 and adjust azimuth adjustment screw for 0 degree phase shift between channels 1 and 4. (Refer to Figure 2-3)
3. Play the test tape MXT-112 and check for 45 degrees or less of phase shift between channel 1 and 2, channel 2 and 3, and channel 2 and 4.

Note) TAPE OUT (CH1) – P601-5 of BOTTOM PCB
TAPE OUT (CH2) – P601-6 of BOTTOM PCB
TAPE OUT (CH3) – P601-7 of BOTTOM PCB
TAPE OUT (CH4) – P601-8 of BOTTOM PCB

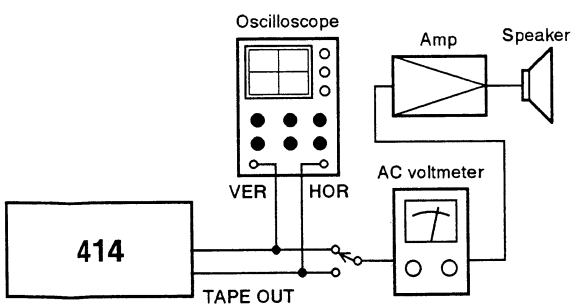


Fig. 2-2

2-4. リール・トルク

1. テイクアップ・トルク／バックテンション・トルク
   トルク測定用テスト・テープ MTT-8111を再生したときのトルク値は下記の通りであること。
   テイクアップ・トルク（右リール台） : 30～65g・cm
   バックテンション・トルク（左リール台）: 2～6g・cm
2. FF／REW トルク
   トルク測定用テスト・テープ MTT-8242を装着し、FF動作およびREW動作の起動トルクをそれぞれ測定する。
   規格値は次の通り。
   FF トルク（右リール台） : 55～140g・cm
   REW トルク（左リール台）: 55～140g・cm

2-5. 録再ヘッド・アジマス

1. 図2-2のようにCH1のTAPE OUTをオシロスコープのVER側に、CH4のTAPE OUTをHOR側に接続する。
2. テスト・テープ MXT-1161の315Hzおよび6.3kHzを再生して、CH1とCH4の位相が0° になるようにアジマス調整ネジを調整する。(図2-3)
3. テスト・テープ MXT-112を再生して、CH1-CH2、CH2-CH3、CH2-CH4の位相が45° 以内であることを確認する。

注) TAPE OUT (CH1) – BOTTOM PCBのP601-5
TAPE OUT (CH2) – BOTTOM PCBのP601-6
TAPE OUT (CH3) – BOTTOM PCBのP601-7
TAPE OUT (CH4) – BOTTOM PCBのP601-8

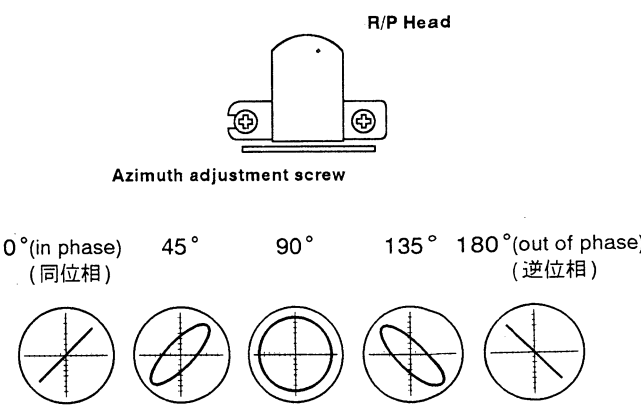
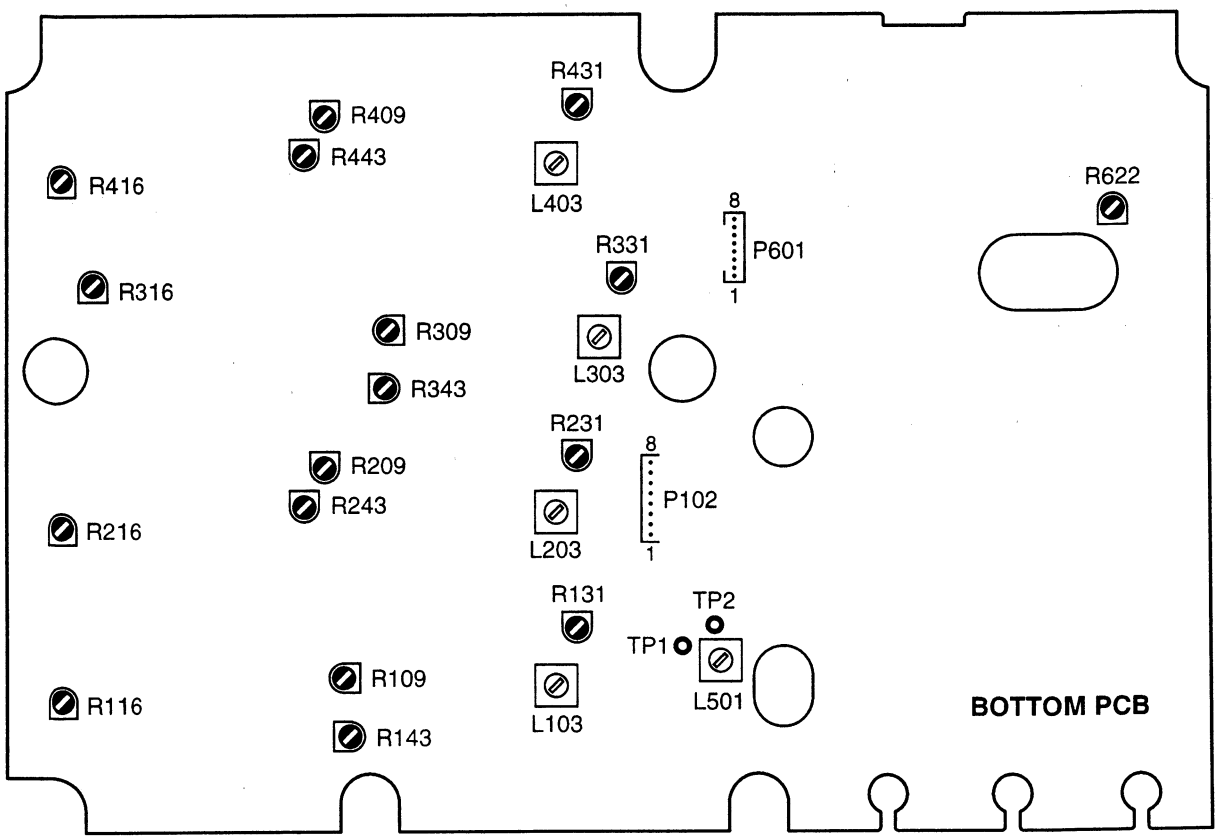


Fig. 2-3

3. AMPLIFIER CHECKS AND ADJUSTMENTS
録音・再生アンプの確認と調整



R109 (R209~R409)	Reproduce Reference Level	再生基準レベル
R116 (R216~R416)	dbx Timing	dbx タイミング
L501	Bias Oscillator Frequency	バイアス発振周波数
L103 (L203~L403)	Bias Amp (Erase)	バイアス・アンプ（消去）
R131 (R231~R431)	Bias Set	バイアス・セット
R143 (R243~R443)	Record Reference Level	録音基準レベル

Fig. 3-1 Adjustment and check points
調整個所および測定個所

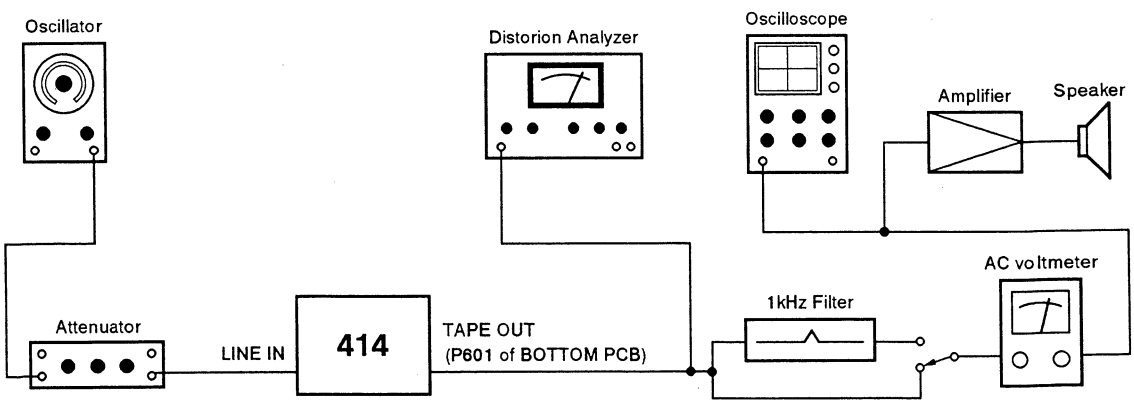


Fig. 3-2 Basic test setup

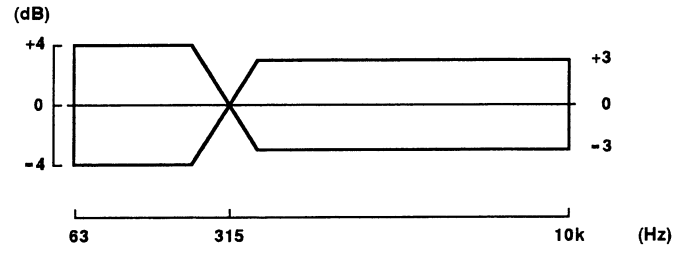


Fig. 3-3 Playback frequency
再生周波数特性

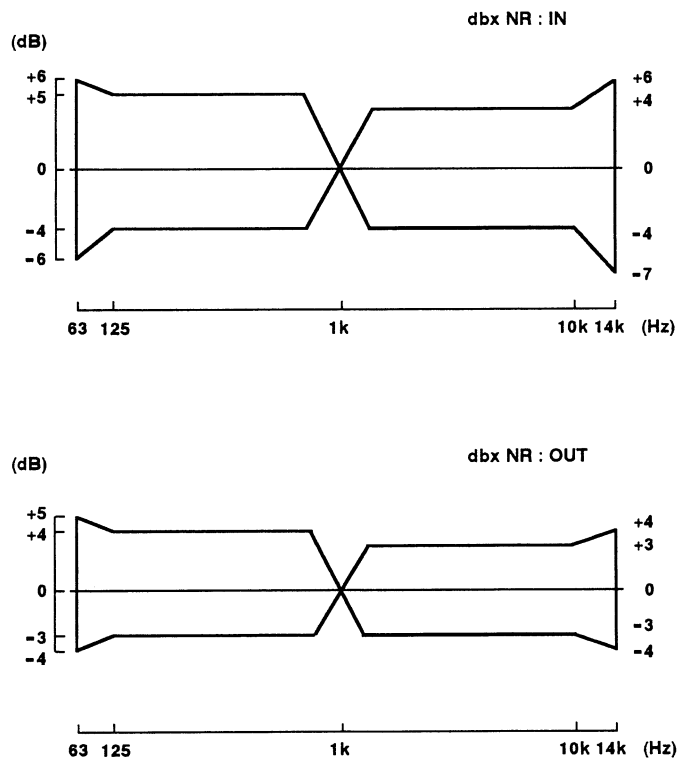


Fig. 3-4 Overall frequency response
録再周波数特性

3-1. Precautions

1. Before performing adjustments or checks, clean and demagnetize the entire tape path.
2. The AC voltmeter used in the procedures must have an input impedance of 1 MΩ or more.
3. 0 dBV corresponds 1.0 V.
4. For blank tape, use TEAC MTT-5563 or equivalent tapes.
5. Indication, for example, "R109 (R209 to R409)" means that R109 is for channel 1, R209 for channel 2, R309 for channel 3 and so on.
6. Refer to Figure 3-1 for location of adjustment points.

3-2. Playback System

Test Mode : PLAY
Measurement Point : TAPE OUT terminals

(TAPE OUT (CH1) – Pin 5 of BOTTOM PCB connector P601
TAPE OUT (CH2) – Pin 6 of BOTTOM PCB connector P601
TAPE OUT (CH3) – Pin 7 of BOTTOM PCB connector P601
TAPE OUT (CH4) – Pin 8 of BOTTOM PCB connector P601)

Adjustment Item	Preliminary	Input Signal	Adjustment Point	Measurement Method / Value Adjusted For
1. Reproduce Reference Level	Connection : Fig. 3-2	MXT – 112	R109 (R209 to R409)	– 10 dBV at output
2. Reproduce Frequency Response	Connection : Fig. 3-2	MXT – 1161	Check only	Standard : Fig. 3-3
3. Level Difference between Channels	Connection : Fig. 3-2	Same as above	Check only	63 Hz to 6.3 kHz : within 3 dB 6.3 kHz to 10 kHz : within 4 dB
4. Level Fluctuation	Connection : Fig. 3-2	Same as above	Check only	63 Hz to 6.3 kHz : within 2 dB 6.3 kHz to 12 kHz : within 3 dB
5. Reproduce S/N Ratio	Connection : Fig. 3-2 ; DIN AUDIO	——	Check only	Measure output when leader tape is played back with the unit set for nominal output level , and compare this reading with nominal output level. : 47 dB or more Defference between channels : within 4 dB

3-3. Recording System

Test Mode : REC/PLAY (unless otherwise specified)
Measurement Point : TAPE OUT terminals (unless otherwise specified)

Adjustment Item	Preliminary	Input Signal	Adjustment Point	Measurement Method / Value Adjusted For
1. dbx Timing	Connect the DC voltmeter between the pin 1 of R116 (R216 to R416) and GND.	——	R116 (R216 to R416)	A voltage reading of 18.4 ± 1 mV
2. Bias Oscillator Frequency	Frequency counter connected between TP1 (GND) and TP2 ; REC FUNCTION sw. : ON for all channels ; Transport : REC/PAUSE	——	L501	85 kHz ± 5 kHz as read on frequency counter

Adjustment Item	Preliminary	Input Signal	Adjustment point	Measurement Method / Value Adjusted For
3. Bias Amp (Erase)	Oscilloscope connected between terminals # 1 (3, 5,7) and GND of P102 (with the scope's probe set to × 10) ; REC FUNCTION sw. : ON for all channels ; Transport : REC/PAUSE	——	L103 (L203 to L403)	Maximum output as read on the scope connected between the specified terminals of P102 : Trminals # 1 and GND – for Ch.1 Trminals # 3 and GND – for Ch.2 Trminals # 5 and GND – for Ch.3 Trminals # 7 and GND – for Ch.4
4. Bias Set	Connection : Fig. 3-2 ; dBx NR : ON	1 kHz/10 kHz, – 30 dBV	R131 (R231 to R431)	Same output level at 1 kHz and 10 kHz signals as read off tape during recording them one after another
5. Record Reference Level	Connection : Fig. 3-2 ; dBx NR : ON	1 kHz, – 10 dBV	R143 (R243 to R443)	– 10 dBV output as read off tape during recording
6. Record Distortion	Connection : Fig. 3-2 ; dBx NR : OFF	Same as above	Check only	Standard : 2.0 % or less
7. Rec/Repro Frequency Responce	Connection : Fig. 3-2 ; dBx NR : ON/OFF	63 Hz to 14 kHz, – 30 dBV	Check only	Specs : Fig. 3-4
8. Level Difference between Channels	Connection : Fig. 3-2 ; dBx NR : OFF	40 Hz to 10 kHz, – 30 dBV	Check only	3 dB or less over 40 Hz to 6.3 kHz 4 dB or less over 6.3 kHz to 10 kHz
9. Level Fluctuation	Same as above	40 Hz to 10 kHz, – 30 dBV	Check only	3 dB or less over 40 Hz to 10 kHz
10. Crosstalk between Tracks	Connection : Fig. 3-2 ; dBx NR : OFF ; REC FUNCTION sw. : ON for Ch.1 and 3	125 Hz, – 10 dBV into Ch.1 and 3 ; No signal into Ch.2 and 4	Check only	Record the input signal, then rewind the tape and play the recording. Compare the output from Ch.1 and Ch.3 with that from Ch.2 and 4. ; Level difference : 35 dB or greater In a similar way, check also the reverse : leakage from Ch.2 and 4 into Ch.1 and 3.
11. Channel Separation	Connection : Fig. 3-2 (1 kHz B.P.F. inserted) ; REC FUNCTION sw. : ON for all channels ; dBx NR : OFF	1 kHz, – 10 dBV into Ch.1 and 3 ; No signal into Ch.2 and 4	Check only	Compare the output level from Ch.1 and 3 with that from Ch.2 and 4 as read off tape during recording. ; Level difference : 40 dB or greater In a similar way, check also the reverse : leakage from Ch.2 and 4 into Ch.1 and 3.
12. Erase Efficiency	Connection : Fig. 3-2 (1 kHz B.P.F. inserted) ; dBx NR : OFF	1 kHz, 0 dBV	Check only	Erase a part of a recorded section and play the tape to compare the level from the remaining recorded section with that from erased section. ; Level difference : 65 dB or greater
13. Rec/Repro S/N Ratio	Connection : Fig. 3-2 ; dBx NR : OFF ; DIN AUDIO	No input	Check only	Compare the output from the "no-signal" recording with nominal ouptut level. ; Level difference : 45 dB or greater Difference between channels : 4 dB or less

3-1. 注意

1. アンプ部の調整の前に、消去ヘッド, 録/再ヘッド, テープ走行部分をそれぞれ充分消磁し、クリーナ液で清掃して下さい。
2. レベル計は、入力インピーダンス1MΩ以上のものを使用して下さい。
3. 0dBV = 1.0Vで表示しています。
4. ブランク・テープは、TEAC MTT-5563または相当品を使用して下さい。
5. R109（R209～R409）と記されているボリュームの部番は、CH1（CH2～CH4）を示します。
6. 調整個所は、図3-1を参照して下さい。

3-2. 再生系

モード：PLAY
測定個所：TAPE OUT端子

（TAPE OUT (CH1) －BOTTOM PCBのP601-5
TAPE OUT (CH2) －BOTTOM PCBのP601-6
TAPE OUT (CH3) －BOTTOM PCBのP601-7
TAPE OUT (CH4) －BOTTOM PCBのP601-8）

調整項目	準備・設定	入力信号	調整個所	測定方法・調整値
1. 再生基準レベル	接続：図3-2	MXT－112	R109（R209～R409）	出力が－10dBVになるように調整
2.再生周波数特性	接続：図3-2	MXT－1161	チェック	規格：図3-3
3. チャンネル間レベル差	接続：図3-2	同上	チェック	63Hz～6.3kHz：3dB以内 6.3kHz～10kHz：4dB以内
4. レベル変動	接続：図3-2	同上	チェック	63Hz～6.3kHz：2dB以内 6.3kHz～12kHz：3dB以内
5. 再生S/N	接続：図3-2 DIN AUDIO	——	チェック	基準出力状態で、リーダー・テープ部を再生した時のノイズ・レベルと基準出力との比： 47dB以上 チャンネル差4dB以内

3-3. 録音系

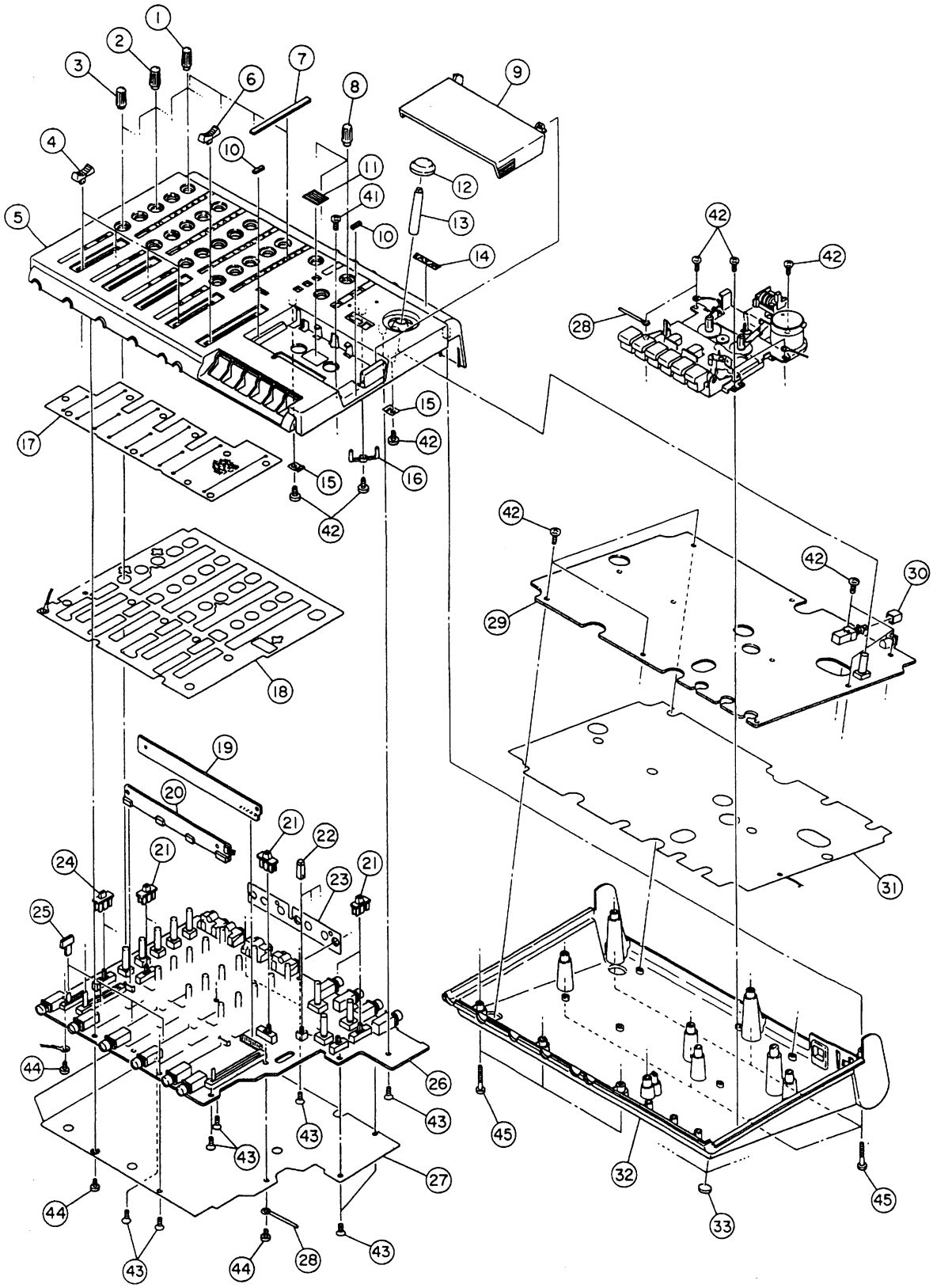
モード： REC/PLAY（特に指示のある場合を除く）
測定個所： TAPE OUT端子（特に指示のある場合を除く）

調整項目	準備・設定	入力信号	調整個所	測定方法・調整値
1. dbx タイミング	R116（R216～R416）の1番ピンとGND間にDC電圧計を接続	——	R116（R216～R416）	電圧値が18.4±1mVになるように調整
2. バイアス発振周波数	TP1（GND）とTP2間に周波数カウンタを接続 REC FUNC. SW：全ch ON REC／PAUSE状態	——	L501	周波数が85kHz±5kHzになるように調整
3. バイアス・アンプ（消去）	P102－1（3, 5, 7）とGND間にオシロスコープを接続 （プローブは×10にて使用） REC FUNC. SW：全ch ON REC／PAUSE状態	——	L103（L203～L403）	下記の端子間の出力が最大になるように調整 CH1：P102の1番端子－GND間 CH2：P102の3番端子－GND間 CH3：P102の5番端子－GND間 CH4：P102の7番端子－GND間
4. バイアス・セット	接続：図3-2 dBx NR：ON	1kHz, 10kHz／－30dBV	R131（R231～R431）	録音・再生したとき、1kHzと10kHzが同レベルになるように調整
5. 録音基準レベル	接続：図3-2 dBx NR：ON	1kHz／－10dBV	R143（R243～R443）	録音・再生したとき、出力が－10dBVになるように調整
6. 録音歪率	接続：図3-2 dBx NR：OFF	同上	チェック	規格：2.0％以下
7. 録再周波数特性	接続：図3-2 dBx NR：ON, OFF	63Hz～14kHz／－30dBV	チェック	規格：図3-4
8. チャンネル間レベル差	接続：図3-2 dBx NR：OFF	40Hz～10kHz／－30dBV	チェック	録再周波数特性規格内におけるch間のレベル差： 40Hz～6.3kHz　：3dB以内 6.3kHz～10kHz　：4dB以内
9. レベル変動	同上	40Hz～10kHz／－30dBV	チェック	録再周波数特性規格内におけるレベル変動： 40Hz～10kHz　：3dB以内
10. トラック間クロストーク	接続：図3-2 dBx NR：OFF REC FUNC. SW：1,3ch ON	1,3ch：125Hz／－10dBV 2,4ch：無信号	チェック	録音・再生したときの1,3chの再生出力と2,4chの再生出力の比： 35dB以上 2,4ch→1,3chの場合も同様
11. チャンネル・セパレーション	接続：図3-2 （1kHz B.P.F.使用） REC FUNC. SW：全ch ON dBx NR：OFF	1,3ch：1kHz／－10dBV 2,4ch：無信号	チェック	録音・再生したときの1,3chの再生出力と2,4chの再生出力の比： 40dB以上 2,4ch→1,3chの場合も同様
12. 消去率	接続：図3-2 （1kHz B.P.F.使用） dBx NR：OFF	1kHz／0dBV	チェック	録音部分の一部を残して消去した後、再生したときの未消去部分との比： 65dB以上
13. 録再S／N	接続：図3-2 dBx NR：OFF DIN AUDIO	無信号	チェック	基準出力と無信号録再出力レベルとの比： 45dB以上 チャンネル差：4dB以内

4. EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

EXPLODED VIEW-1



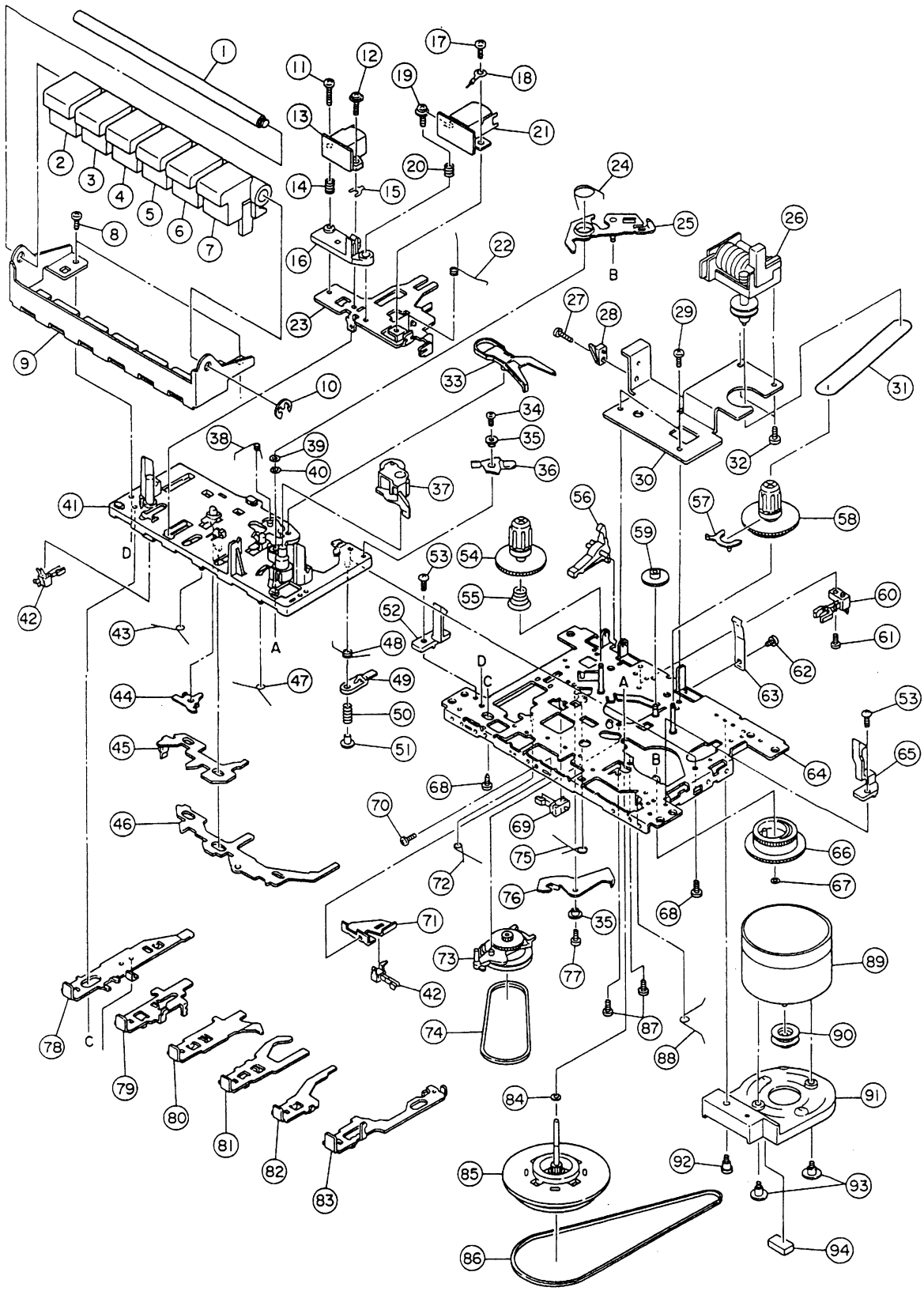
EXPLODED VIEW-1

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	9260262700	KNOB, ROTARY N63/B09	
1- 2	9260262800	KNOB, ROTARY N63/G04	
1- 3	9260262900	KNOB, ROTARY N63/WHITE	
1- 4	M00004000A	KNOB, FADER 0G	
1- 5	*9260271401	CABINET, TOP	
1- 6	M00004001A	KNOB, FADER RD	
1- 7	*9260271201	WINDOW, METER	
1- 8	9260269600	KNOB, ROTARY (ORANGE)	
1- 9	*9260282600	COVER, CASSETTE	
1-10	*9260225700	CUSHION, DOOR	
1-11	*9260205700	PLATE, REFLECT	
1-12	M00004200A	KNOB, PITCH GY	
1-13	9260271000	JOINT	
1-14	*9260271101	BADGE, TASCAM SILVER	
1-15	*9260282700	SPRING, COVER	
1-16	9260271600	LENS, LED	
1-17	*9260272100	BLIND, S-VR	
1-18	*9260272902	SHIELD SHEET, MIXER	
1-19	*9145200200	JUMP A PCB ASSY	
1-20	*9145200300	JUMP B PCB ASSY	
1-21	M00006100A	KNOB, SLIDE GY	
1-22	9260263300	KNOB, BUTTON COVER WHT/N63	
1-23	*9260283600	BLIND, PIN JACK	
1-24	M00462300A	KNOB, SLIDE	
1-25	9260271301	KNOB, TRIM	
1-26	*9145200100	MIXER PCB ASSY	
1-27	*9260282002	SHIELD ASSY	
1-28	*9788823059	HARNES CLIP, 3.3X6.0X54	
1-29	*9145201103	BOTTOM PCB ASSY	
1-30	5801503800	EJECT BUTTON, P-N15-A	
1-31	*9260272802	SHIELD SHEET, R/P	
1-32	*9260271501	CABINET, BOTTOM	
1-33	*9260262300	FOOT	
1-41	*9783613010	SCREW, BTT-P M3X10 (BLK)	
1-42	*9783603008	SCREW, BTT-P M3X8	
1-43	*9783133010	SCREW, FTT-P M3X10	
1-44	*9783603010	SCREW, BTT-P M3X10	
1-45	*9783613020	SCREW, BTT-P M3X20	

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*9125115000	AC ADAPTOR, PS-P414 [US/C]	
	*9125115400	AC ADAPTOR, PS-P414 [A]	
	*9125115300	AC ADAPTOR, PS-P414 [UK]	
	*9125115800	AC ADAPTOR, PS-P414 [J]	
	*9125115200	AC ADAPTOR, PS-P414 [E]	
	*9101408400	OWNER'S MANUAL, ENGLISH [EXCEPT J]	
	*9101408500	OWNER'S MANUAL, FRENCH/GERMAN [E]	
	*9101408600	OWNER'S MANUAL, JAPANESE [J]	

EXPLODED VIEW-2



EXPLODED VIEW-2

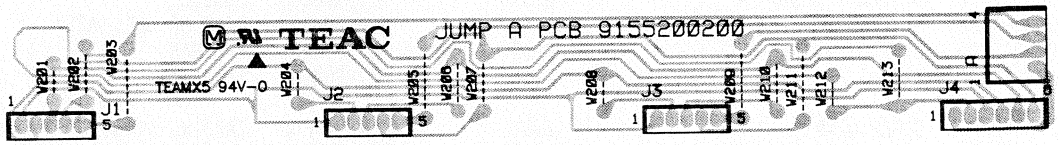
REF. NO.	PARTS NO.	DESCRIPTION
2- 1	9278307000	BUTTON LEVER SHAFT
2- 2	9260272200	BUTTON (REC)
2- 3	9260272300	BUTTON (PLAY)
2- 4	9260272400	BUTTON (REW)
2- 5	9260272500	BUTTON (FF)
2- 6	9260272600	BUTTON (STOP)
2- 7	9260272700	BUTTON (PAUSE)
2- 8	*9278291700	TAPPING SCREW BTT-S M2X8
2- 9	*9278362800	B FRAME (H)
2-10	*9278362900	E-RING 3.2
2-11	*9278362300	SCREW M2X9
2-12	*9278362200	CAP SCREW M2X3
2-13	5378602100	ERASE HEAD 4-4
2-14	9278197900	E. H. SPRING
2-15	*9278305400	E HEAD SPACER
2-16	*9278305200	HEAD BASE
2-17	*9278362100	BIND SCREW M2X3
2-18	*9278361900	LUG PLATE(3B)2.0
2-19	*9278202700	AZIMUTH SCREW M2X7
2-20	9278198400	AZIMUTH SPRING
2-21	5378602000	R/P HEAD
2-22	*9278360700	PANEL P SPRING
2-23	*9278303800	HEAD PANEL
2-24	9278268900	GEAR PLATE SPRING
2-25	9278361100	GEAR PLATE ASSY
2-26	M00467400A	COUNTER, MK394S-008
2-27	*9783202006	SCREW, BTT-S M2X6
2-28	9135035800	PUSH SW, 1-1 SPPB22
2-29	*9783152006	SCREW, FTT-P M2X6
2-30	*9260270900	BRACKET, COUNTER
2-31	9260130700	COUNTER BELT
2-32	*9783132606	SCREW, FTT-P M2.6X6
2-33	9278307300	SENSING LEVER
2-34	*9278363300	SCREW, PS-TITE M2X3
2-35	*9278292200	P ARM COLLAR
2-36	9278363100	P ARM
2-37	9278306800	PINCH ROLLER ARM ASSY
2-38	9278268600	M CONTROL SPRING
2-39	*9278362500	P WASHER CUT 1.45X3.2X0.5
2-40	*9278362700	P WASHER 2.1X4X0.13
2-41	*9278360200	BASE ASSY
2-42	9278304200	LEAF SWITCH, MSW-1541T
2-43	9278267300	BUTTON LEVER SPRING (A)
2-44	*9278267800	PR STOPPER
2-45	*9278304700	SWITCH ACTUATOR
2-46	*9278266201	PUSH BUTTON ACTUATOR
2-47	9278268000	BUTTON LEVER SPRING (B)
2-48	9278306400	P CONTORL SPRING
2-49	9278306500	PAUSE LEVER
2-50	9278267100	PAUSE LEVER SPRING

REF. NO.	PARTS NO.	DESCRIPTION
2-51	9278267200	PAUSE STOPPER
2-52	*9260223300	CASSETTE GUIDE (L)
2-53	*9783202006	SCREW, BTT-S M2X6
2-54	9278304800	SUPPLY REEL ASSY
2-55	9278361400	BACK TENSION SPRING
2-56	9278200300	RECORD SAFETY LEVER
2-57	9278306900	SENSER
2-58	9278306600	TAKE UP REEL ASSY
2-59	9278199900	FF GEAR
2-60	9278304300	LEAF SWITCH, MSW-1275
2-61	*9278304600	TAPPING SCREW C-TITE M2X5
2-62	*9278362000	DEL TITE SCREW M2X3
2-63	9278305100	PACK SPRING
2-64	*9278360400	CHASSIS ASSY
2-65	*9260223400	CASSETTE GUIDE (R)
2-66	9278289100	CAM GEAR
2-67	*9278291400	P WASHER CUT 1.2X3.8X0.3
2-68	*9278202200	SCREW, P TAPPING BIND M2X5
2-69	9278292500	LEAF SW, MSW-17820-MVDO
2-70	*9278369100	CAMERA SCREW M2X5
2-71	*9278369000	SW BRACKET
2-72	9278267600	P.S. LEVER SPRING
2-73	9278361200	RF CLUTCH ASSY
2-74	9278289300	RF BELT
2-75	9278267900	REC BUTTON LEVER SPRING
2-76	9278363000	REC ARM
2-77	*9278202100	C TAPPING SCREW M2X4
2-78	9278266300	REC BUTTON LEVER
2-79	9278266400	PLAY BUTTON LEVER
2-80	9278360300	REW BUTTON LEVER
2-81	9278266600	FF BUTTON LEVER
2-82	9278303700	STOP BUTTON LEVER
2-83	9278306300	PAUSE BUTTON LEVER
2-84	*9278308400	P WASHER 2X3.5X0.4
2-85	9278361300	FLYWHEEL ASSY
2-86	9278361600	MAIN BELT
2-87	*9278291000	SCREW, TAPPING M2X4.5
2-88	9278267500	E ACTUATOR SPRING
2-89	9278361800	CAPSTAN MOTOR, EG-530KD-2F
2-90	9278361500	MOTOR PULLY
2-91	*9278304900	MOTOR BRACKET
2-92	*9278290400	MB SCREW
2-93	*9278290100	MOTOR COLLAR SCREW
2-94	*9278361700	ANTI VIBRATION FELT MAT

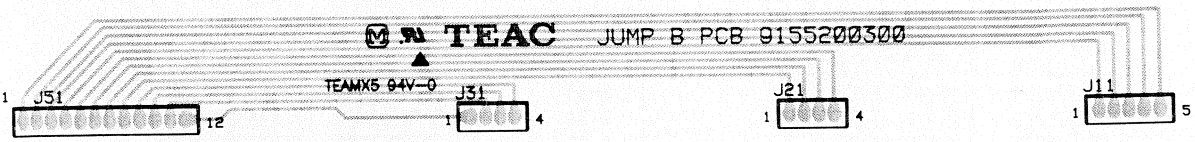
5. PC BOARDS AND PARTS LIST

基板図とパーツ・リスト

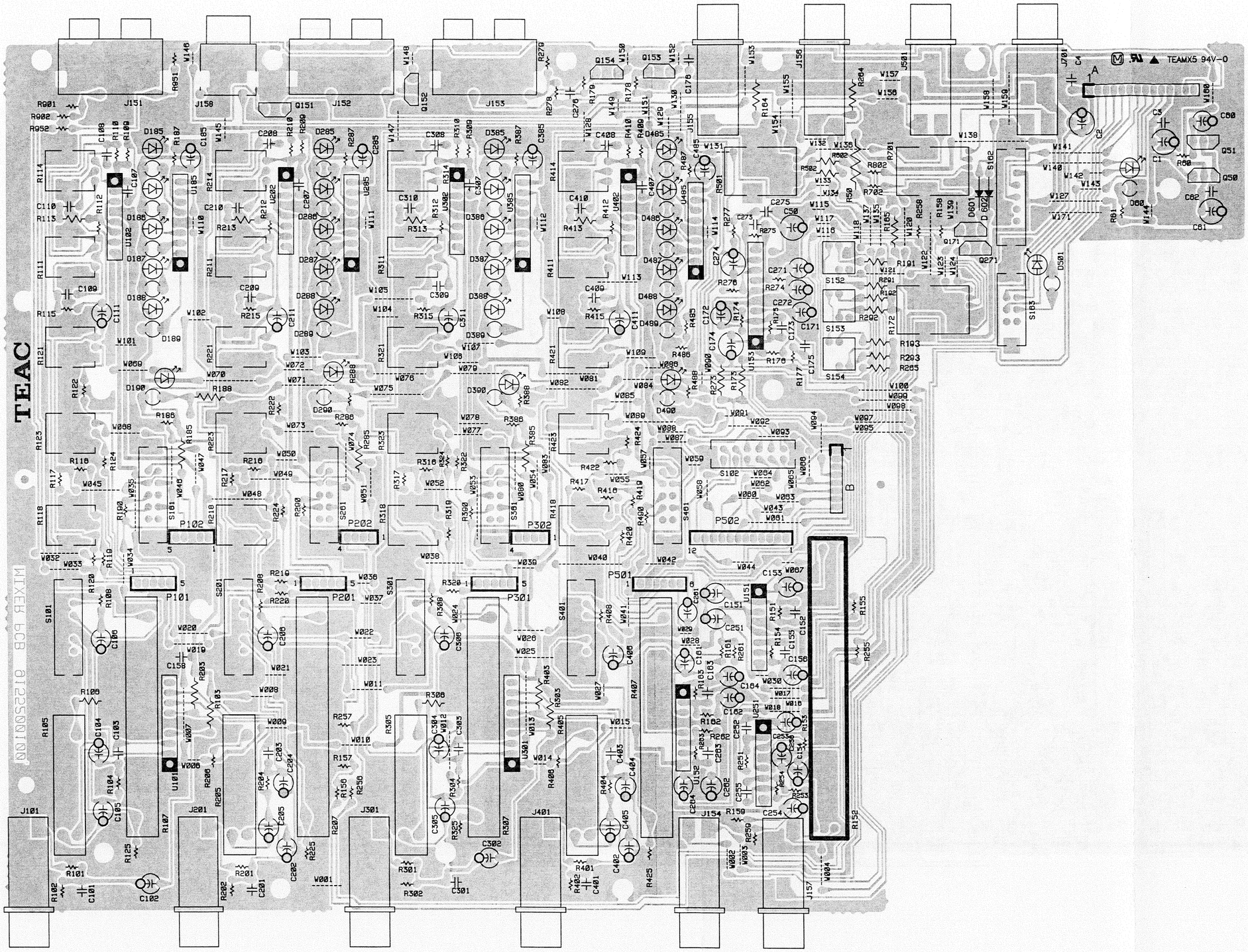
JUMP A PCB



JUMP B PCB



MIXER PCB


TEAC
MIXER PCB 012SS001AW
TEAMX5 94V-0
J151
J152
J153
J158
J501
J701
P101
P102
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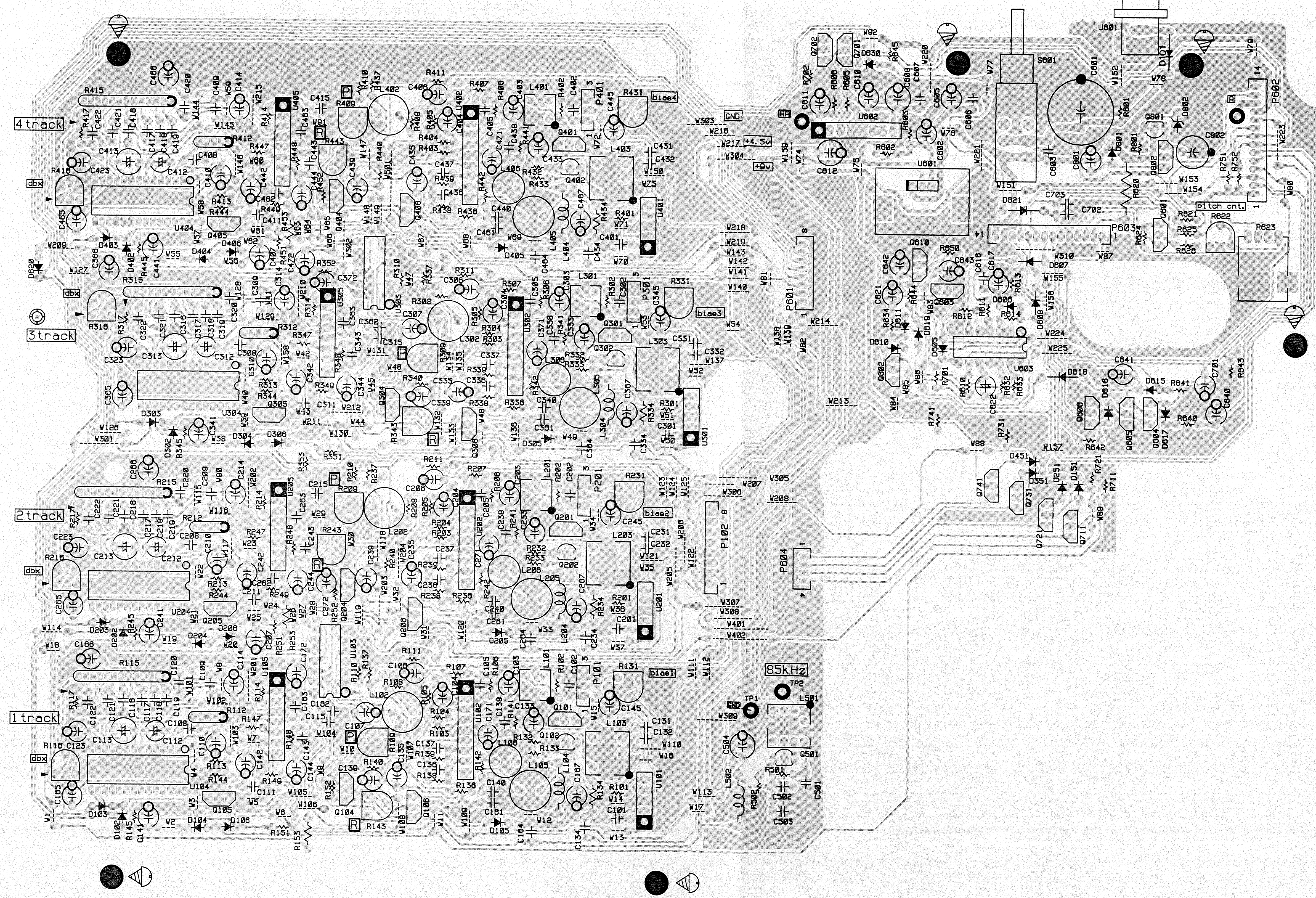
P202
P301
P302
P501
P502
J101
J201
J301
J401
J154
J157
S101
S102
S152
S153
S154
S162
S163
S201
S301
S401
S501
U101
U102
U151
U152
U153
U202
U231
U301
U401
U402
U501
U502
U585
Q151
Q152
Q153
Q154
Q171
Q271
D501
D601
D602

BOTTOM PCB


4 track
3 track
2 track
1 track
dbx
bias4
bias3
bias2
bias1
GND
+4.5v
+9v
85kHz
pitch cnt.

MIXER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*9145200100	MIXER PCB ASSY
	*9155200100	MIXER PCB
	*9107091600	14P MIXER WIRES
	*9107091700	8P MIXER WIRES
D60	9174021520	LED, L-934IT (RED)
D185-485	9174021520	LED, L-934IT (RED)
D186-486	9174021520	LED, L-934IT (RED)
D187-487	9174021520	LED, L-934IT (RED)
D188-488	9174021620	LED, L-934YC (YELLOW)
D189-489	9174021620	LED, L-934YC (YELLOW)
D190-490	9174021520	LED, L-934IT (RED)
D501	9174021520	LED, L-934IT (RED)
D601, 602	9165022150	D, TP 1SS133T
J101	9143917000	JACK, 064-3 (BLK)
J151-153	9143387000	JACK, 2P YKC21-3063 (BLK)
J154	9143919000	JACK, 064-0-2 (RED)
J155, 156	9143916000	JACK, 064-2 (BLK)
J157	9143916000	JACK, 064-2 (BLK)
J158	9144333000	JACK, RCA YKC-21-3048
J201-401	9143917000	JACK, 064-3 (BLK)
J501	9143491000	JACK, 064 (BLK)
J701	9143918000	JACK, 064-4 (BLK)
P101, 102	9144034001	CN, TUC-P5P-B1
P201	9144034001	CN, TUC-P5P-B1
P202	9144033001	CN, TUC-P4P-B1
P301	9144034001	CN, TUC-P5P-B1
P302	9144033001	CN, TUC-P4P-B1
P501	9144035001	CN, TUC-P6P-B1
P502	9144041001	CONNECTOR PLUG, 12P
Q50	9163011220	TR, DTA 124ES TP
Q51	9163310420	TR, DTC 124ES TP
Q151-154	9163450020	TR, DTC314TS
Q171, 271	9163450020	TR, DTC314TS
R50	⚠ 9114433060	R, NONFLMMABLE 1W 15
R105-405	9172031900	VR, RS20111P9009TK-10KRD
R107-407	9172032600	VR, RS45111 P6022 10KA TK
R111-411	9172030500	VR, EVUF3AF30B15100KB
R114-414	9172030500	VR, EVUF3AF30B15100KB
R118-418	9172030400	VR, EVUF1AF30B14 10KB
R121-421	9172030300	VR, EVU F0A F30 A14 10KA
R123-423	9172030300	VR, EVU F0A F30 A14 10KA
R152	9172032700	VR, RS60112 P6026 10KAX2
R172	9172030700	VR, EVJY00F30A14 10KAX2
R501	9172030700	VR, EVJY00F30A14 10KAX2
R701	9172030700	VR, EVJY00F30A14 10KAX2
S101	9135037000	SLIDE SW, SSSH013NB2
S102	9135036300	SLIDE SW, SSSU042NA2-TK
S152-154	9135037300	SW, PS009-PA022BAT-PA 5.5
S161	9135035200	SLIDE SW, SSSU023NB2-TK
S162	9135037000	SLIDE SW, SSSH013NB2

MIXER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
S163	9135037400	SLIDE SW, SSSU022-S09N1
S201	9135037000	SLIDE SW, SSSH013NB2
S261	9135035200	SLIDE SW, SSSU023NB2-TK
S301	9135037000	SLIDE SW, SSSH013NB2
S361	9135035200	SLIDE SW, SSSU023NB2-TK
S401	9135037000	SLIDE SW, SSSH013NB2
S461	9135035200	SLIDE SW, SSSU023NB2-TK
U101, 301	9167015910	IC, NJM2068SD
U102-402	9167015800	IC, NJM4565L
U151, 251	9167015800	IC, NJM4565L
U152	9167015800	IC, NJM4565L
U153	9167022300	IC, LA6515
U185-485	9167017000	IC, LB1423N

BOTTOM PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	*9145201103	BOTTOM PCB ASSY
	*9155201100	BOTTOM PCB
	*9783603008	SCREW, BTT-P M3X8
C601	⚠ 9117303600	C, ELEC 4700UF 25V
D101	9165024350	D, RB-100A
D102-402	9165022150	D, TP 1SS133T
D103-403	9165022150	D, TP 1SS133T
D104-404	9165022150	D, TP 1SS133T
D105-405	9165022150	D, TP 1SS133T
D106-406	9165022150	D, TP 1SS133T
D151-451	9165022150	D, TP 1SS133T
D605-608	9165022150	D, TP 1SS133T
D610, 611	9165022150	D, TP 1SS133T
D615-621	9165022150	D, TP 1SS133T
D630	9165022150	D, TP 1SS133T
D801	9165022150	D, TP 1SS133T
D802	9166054251	D, ZENER MTZ J 11B
J601	9144357000	JACK, DC POWER DJ-0702N
L101-401	9173009300	COIL, TRAP 85KHZ
L102-402	9173009400	COIL, L.P.F. 85KHZ
L103-403	9173010800	COIL, SLAVE
L104-404	9173010600	COIL, 10UHJ
L105-405	9173009400	COIL, L.P.F. 85KHZ
L106-406	9173008700	COIL, 36MH
L501	9173010700	COIL, MASTER OSC
L502	9173006350	COIL, 220MH EC35-221K
P101	9143171000	PLUG, CONNECTOR B3B-EH 3P
P102	9143176000	PLUG, 8P B8B-EH-K
P201	9143171020	PLUG, CONNECTOR B3B-EH-A B
P301	9143171010	PLUG, CONNECTOR B3B-EH-A R

BOTTOM PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
P401	9143171040	PLUG, CONNECTOR 3P
P601	9143236000	PLUG, 8P B8B-PH
P602	9143242000	PLUG, 14P B14B-PH-K
P603	9143242020	PLUG, 14P B14B-PN-K
P604	9143232000	PLUG, B4B-PH 4P
Q101-401	9163014220	TR, DTC363ES TP
Q102-402	9163450300	TR, 2SC2002L
Q104-404	9163450020	TR, DTC314TS
Q105-405	9163450020	TR, DTC314TS
Q106-406	9163011220	TR, DTA 124ES TP
Q501	9163450520	TR, 2SC2603-T11-F
Q601	9164004620	FET, 2SK381-T11-D
Q602	9163011220	TR, DTA 124ES TP
Q603	9163310420	TR, DTC 124ES TP
Q604	9163011220	TR, DTA 124ES TP
Q605	9163310420	TR, DTC 124ES TP
Q606	9163015520	TR DTD 123TS
Q610	9163310420	TR, DTC 124ES TP
Q701	9163310420	TR, DTC 124ES TP
Q702	9163011220	TR, DTA 124ES TP
Q711-741	9163202620	TR, DTB143ES TP
Q801	9163309420	TR, 2SC1815GR (TP)
Q802	9163011220	TR, DTA 124ES TP
R109-409	9112059810	VR, 10K TB067A
R112-412	9111255000	R, ARRAY EXBZ5L045G DBX
R115-415	9111256000	R, ARRAY EXBZ13L046G DBX
R116-416	9112056010	VR, 4.7K TB067A
R131-431	9112059510	VR, 200K TB067A
R143-443	9112059810	VR, 10K TB067A
R620	⚠ 9114725005	R, NONFLAMMABLE 2W 10
R622	9112058010	VR, 1K TB067A
R623	9172024100	VR, RK11K113A229-1.5KB TK
S601	⚠ 9135032101	PUSH SW, SPUN19C606-TK
U101-401	9167017200	IC, BA7755
U102-402	9167015910	IC, NJM2068SD
U103, 303	9167009800	IC, TC4066BP
U104-404	9167026100	IC, AN7367K
U105-405	9167015800	IC, NJM4565L
U601	9167025600	IC, NJM317F
U601	9260259000	HEAT SINK, CS-B2202-02317
U602	9167015010	IC, M5218L
U603	9167026900	IC, TC4069UBP

JUMP A PCB ASSY

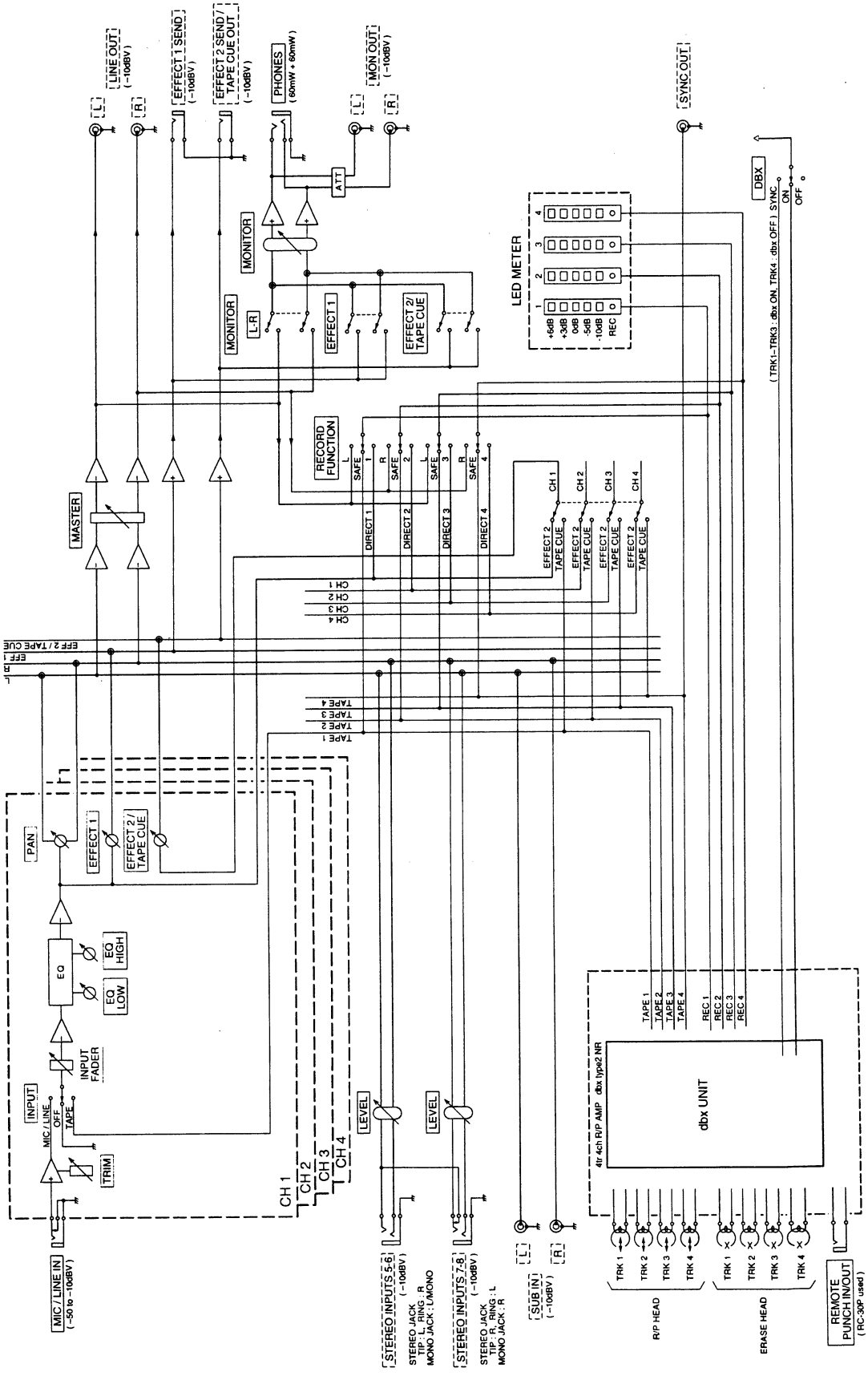
REF. NO.	PARTS NO.	DESCRIPTION
	*9145200200	JUMP A PCB ASSY
	*9155200200	JUMP A PCB
	*9107091800	4P JUMP WIRES
J1-J3	9144132001	CONNECTOR, TUC-P5X-B1
J4	9144133001	CONNECTOR, TUC-P6X-B1

JUMP B PCB ASSY

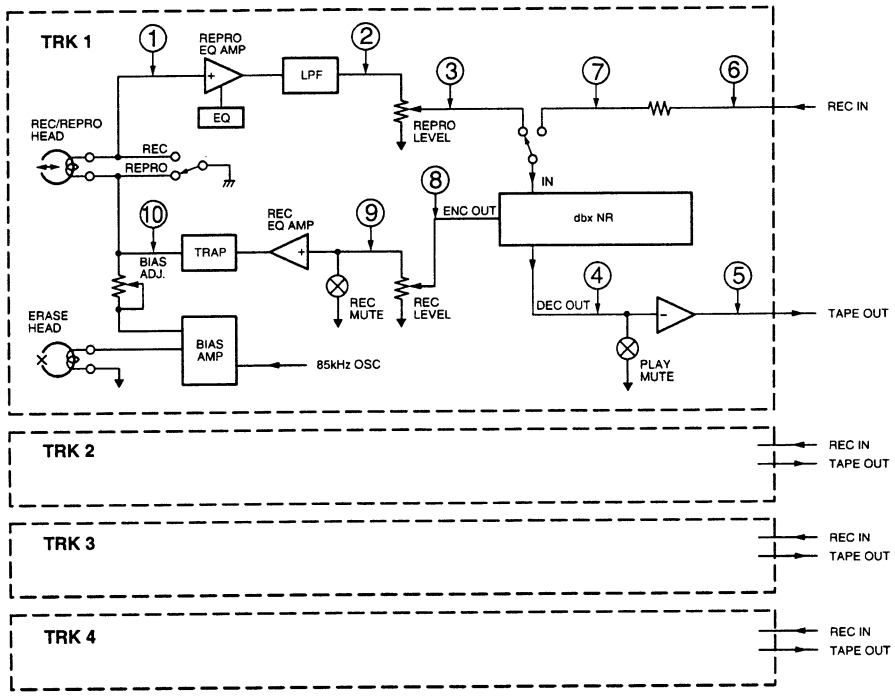
REF. NO.	PARTS NO.	DESCRIPTION
	*9145200300	JUMP B PCB ASSY
	*9155200300	JUMP B PCB
J11	9144132001	CONNECTOR, TUC-P5X-B1
J21	9144131001	CONNECTOR, TUC-P4X-B1
J31	9144131001	CONNECTOR, TUC-P4X-B1
J51	9144139001	CONNECTOR PLUG, 12P

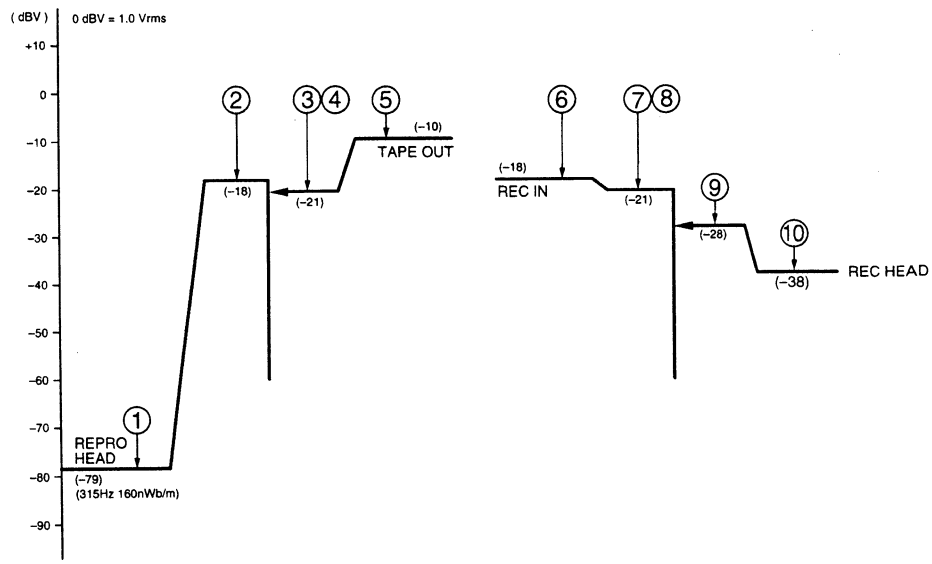
6. BLOCK DIAGRAM

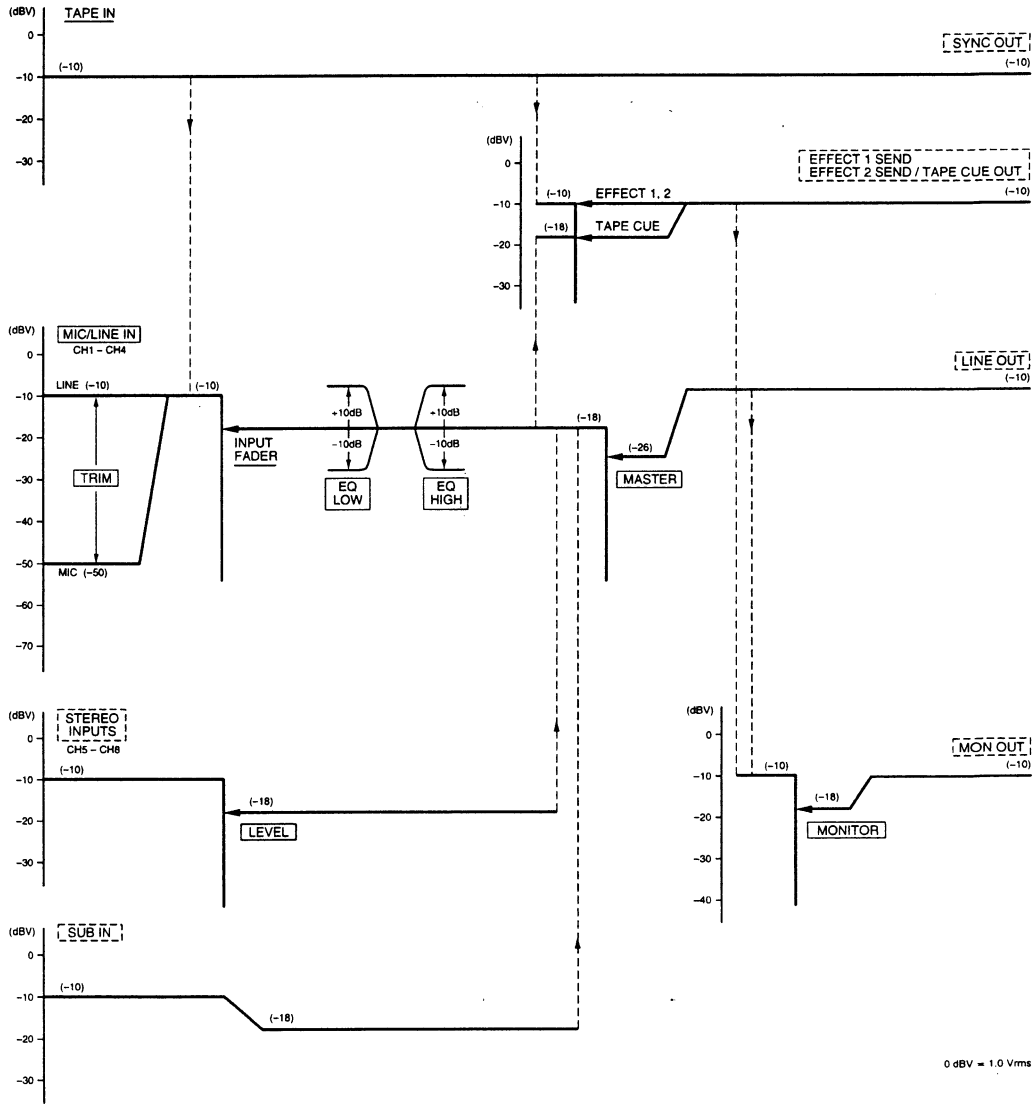
ブロック・ダイアグラム

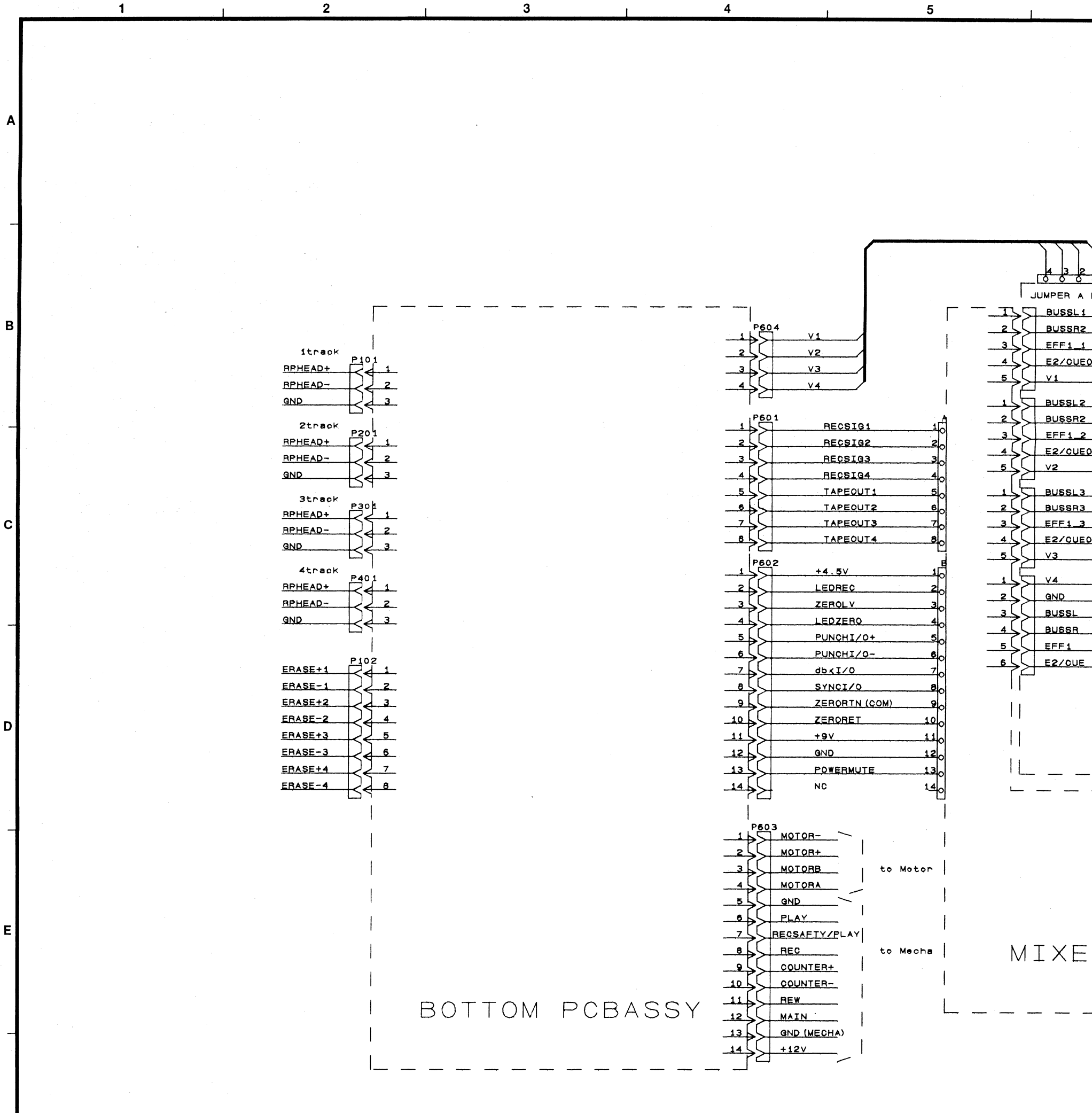


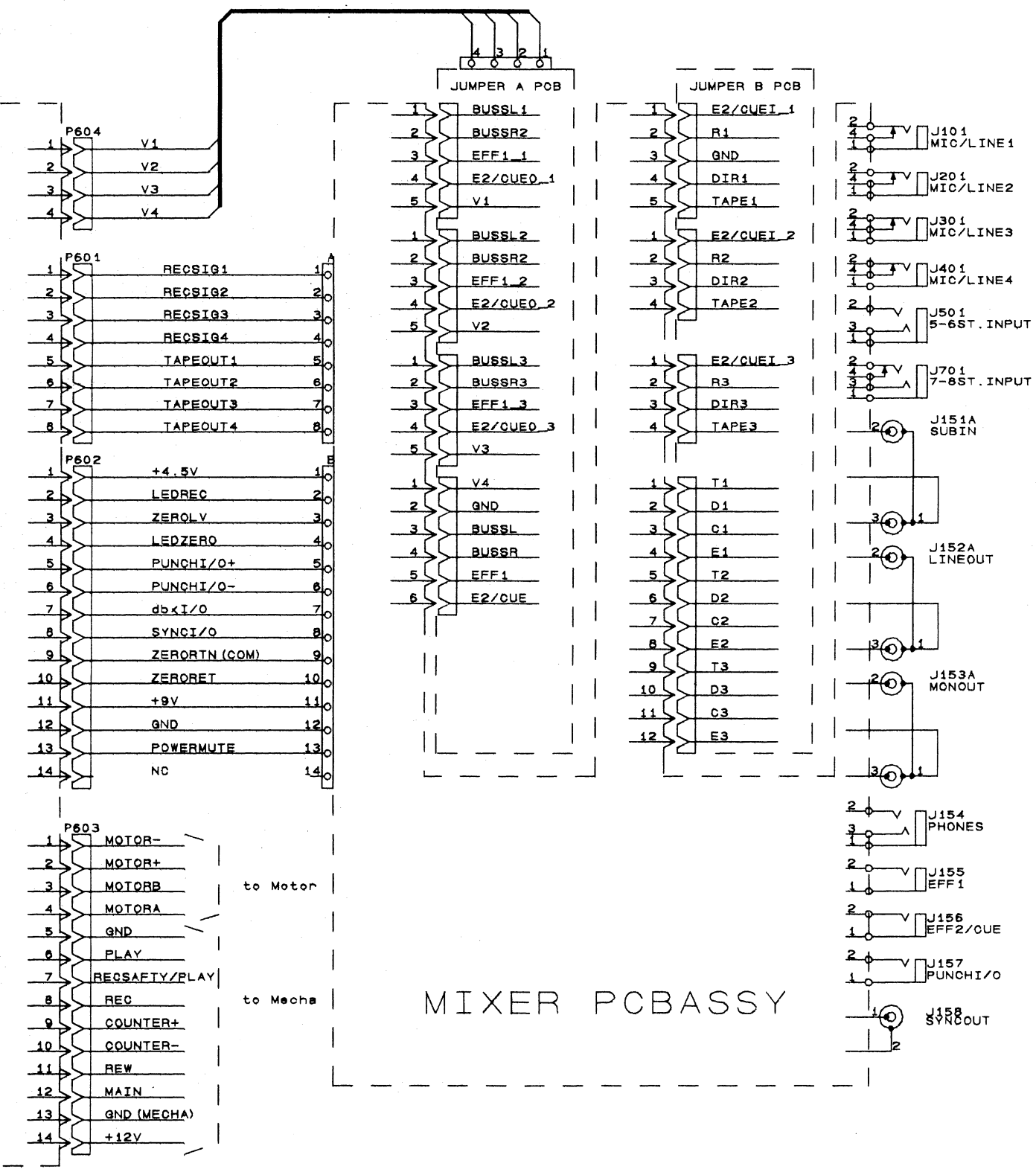
7. LEVEL DIAGRAM
レベル・ダイアグラム

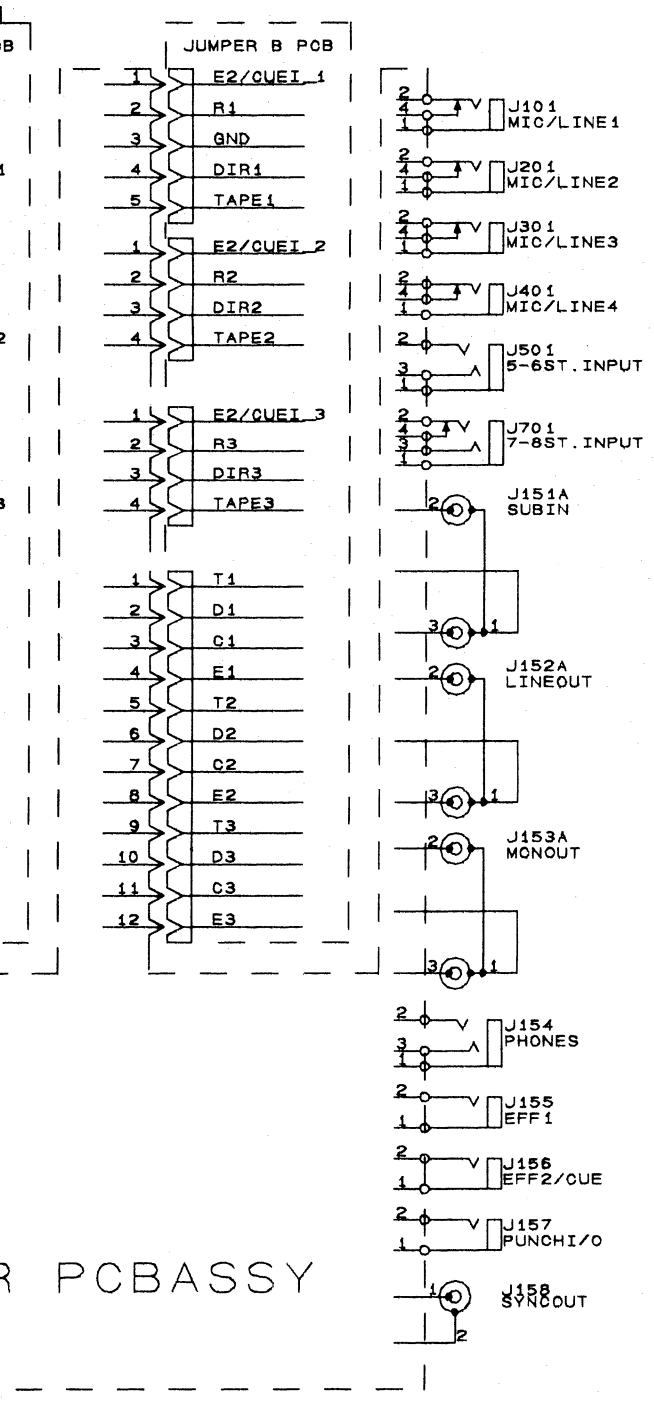


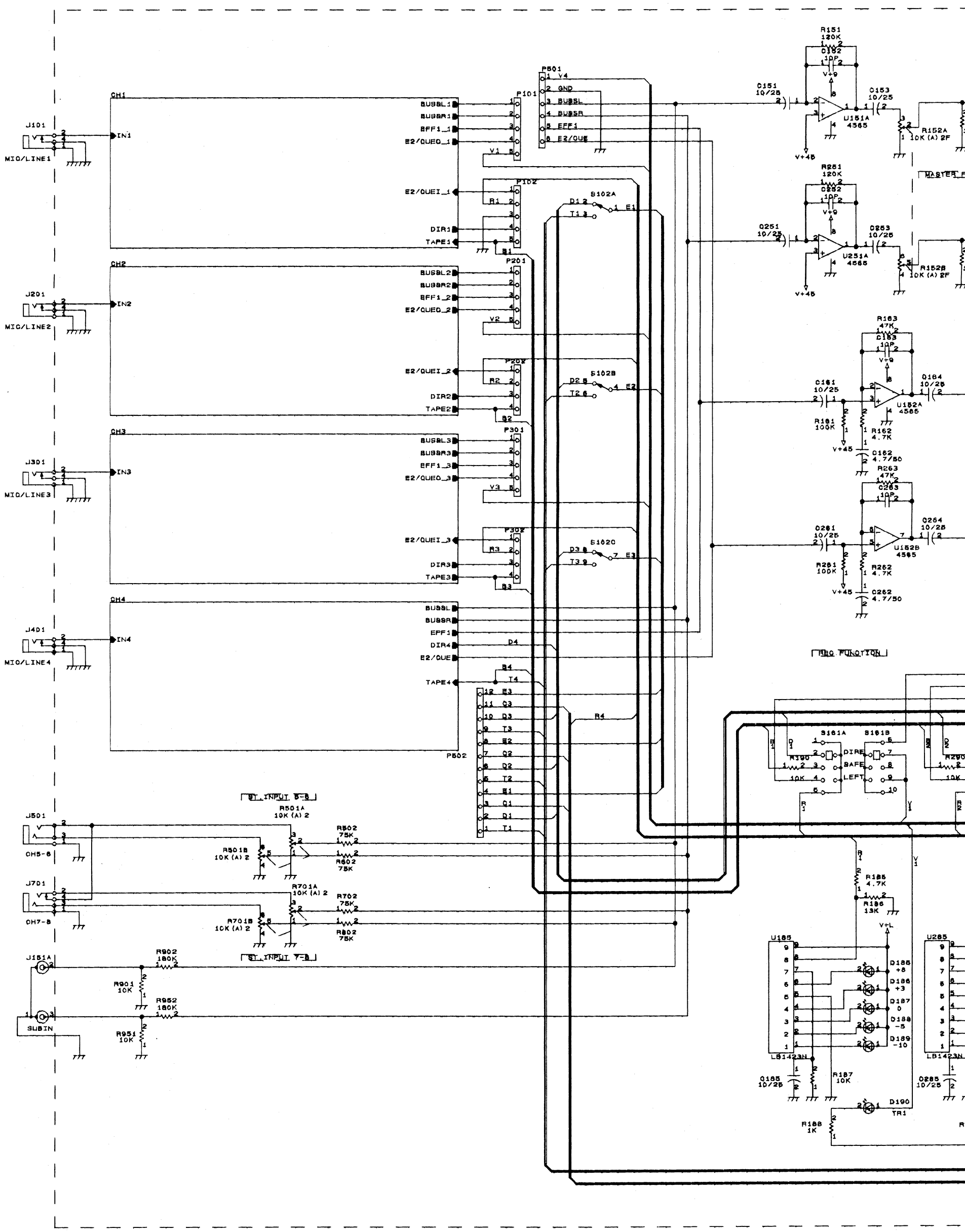


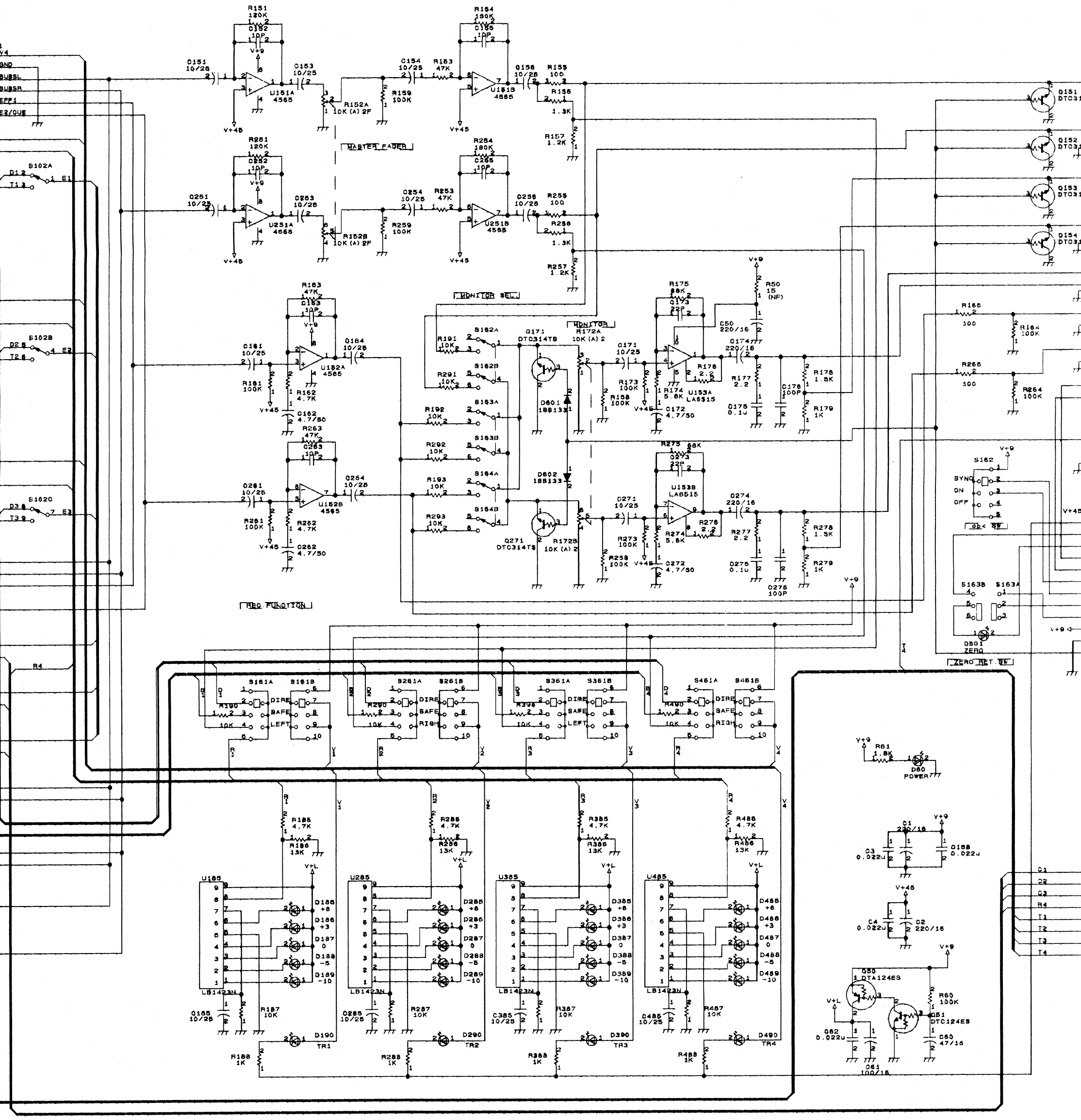

(dBV)
TAPE IN
SYNC OUT
(-10)
EFFECT 1 SEND
EFFECT 2 SEND / TAPE CUE OUT
EFFECT 1, 2
TAPE CUE
(-18)
MIC/LINE IN
CH1 - CH4
LINE (-10)
TRIM
MIC (-50)
INPUT FADER
+10dB
-10dB
EQ LOW
EQ HIGH
MASTER
(-26)
LINE OUT
STEREO INPUTS
CH5 - CH8
LEVEL
MONITOR
MON OUT
SUB IN
0 dBV = 1.0 Vrms

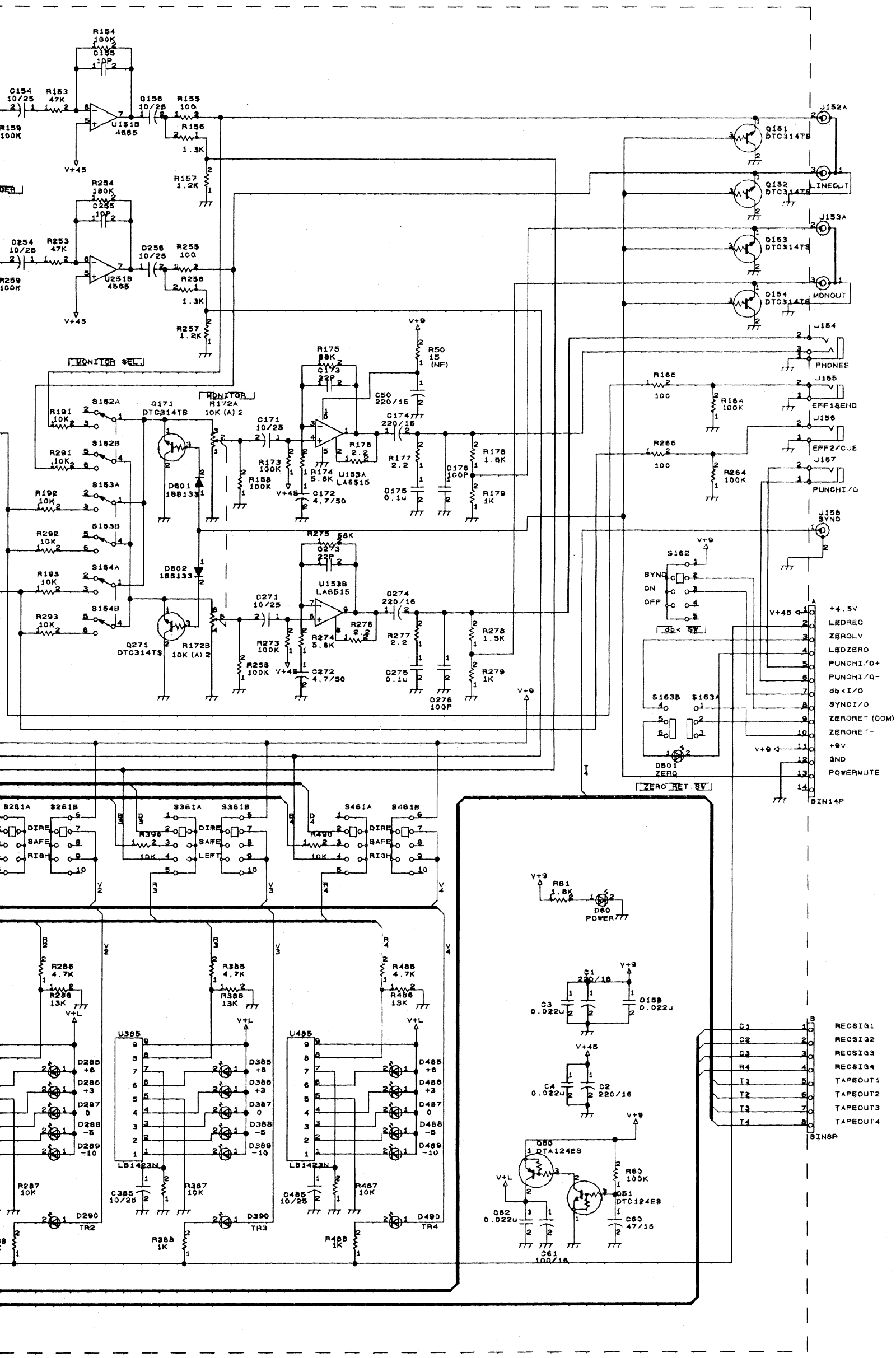

1track
P101
RPHEAD+
RPHEAD-
GND
2track
P201
3track
P301
4track
P401
P102
ERASE+1
ERASE-1
ERASE+2
ERASE-2
ERASE+3
ERASE-3
ERASE+4
ERASE-4
P604
V1
V2
V3
V4
P601
RECSIG1
RECSIG2
RECSIG3
RECSIG4
TAPEOUT1
TAPEOUT2
TAPEOUT3
TAPEOUT4
P602
+4.5V
LEDREC
ZEROLV
LEDZERO
PUNCHI/O+
PUNCHI/O-
dbxI/O
SYNCI/O
ZERORTN (COM)
ZERORET
+9V
GND
POWERMUTE
NC
P603
MOTOR-
MOTOR+
MOTORB
MOTORA
GND
PLAY
RECSAFTY/PLAY
REC
COUNTER+
COUNTER-
REW
MAIN
GND (MECHA)
+12V
to Motor
to Mecha
JUMPER A
BUSSL1
BUSSR2
EFF1_1
E2/CUEO
V1
BUSSL2
BUSSR2
EFF1_2
E2/CUEO
V2
BUSSL3
BUSSR3
EFF1_3
E2/CUEO
V3
V4
GND
BUSSL
BUSSR
EFF1
E2/CUE
BOTTOM PCBASSY
MIXE


JUMPER A PCB
JUMPER B PCB
P604
V1
V2
V3
V4
P601
RECSIG1
RECSIG2
RECSIG3
RECSIG4
TAPEOUT1
TAPEOUT2
TAPEOUT3
TAPEOUT4
P602
+4.5V
LEDREC
ZEROLV
LEDZERO
PUNCHI/O+
PUNCHI/O-
db<I/O
SYNCI/O
ZERORTN (COM)
ZERORET
+9V
GND
POWERMUTE
NC
P603
MOTOR-
MOTOR+
MOTORB
MOTORA
GND
PLAY
RECSAFTY/PLAY
REC
COUNTER+
COUNTER-
REW
MAIN
GND (MECHA)
+12V
to Motor
to Mecha
BUSSL1
BUSSR2
EFF1_1
E2/CUEO_1
V1
BUSSL2
BUSSR2
EFF1_2
E2/CUEO_2
V2
BUSSL3
BUSSR3
EFF1_3
E2/CUEO_3
V3
V4
GND
BUSSL
BUSSR
EFF1
E2/CUE
E2/CUEI_1
R1
GND
DIR1
TAPE1
E2/CUEI_2
R2
DIR2
TAPE2
E2/CUEI_3
R3
DIR3
TAPE3
T1
D1
C1
E1
T2
D2
C2
E2
T3
D3
C3
E3
J101
MIC/LINE1
J201
MIC/LINE2
J301
MIC/LINE3
J401
MIC/LINE4
J501
5-6ST.INPUT
J701
7-8ST.INPUT
J151A
SUBIN
J152A
LINEOUT
J153A
MONOUT
J154
PHONES
J155
EFF1
J156
EFF2/CUE
J157
PUNCHI/O
J158
SYNCOUT
MIXER PCBASSY

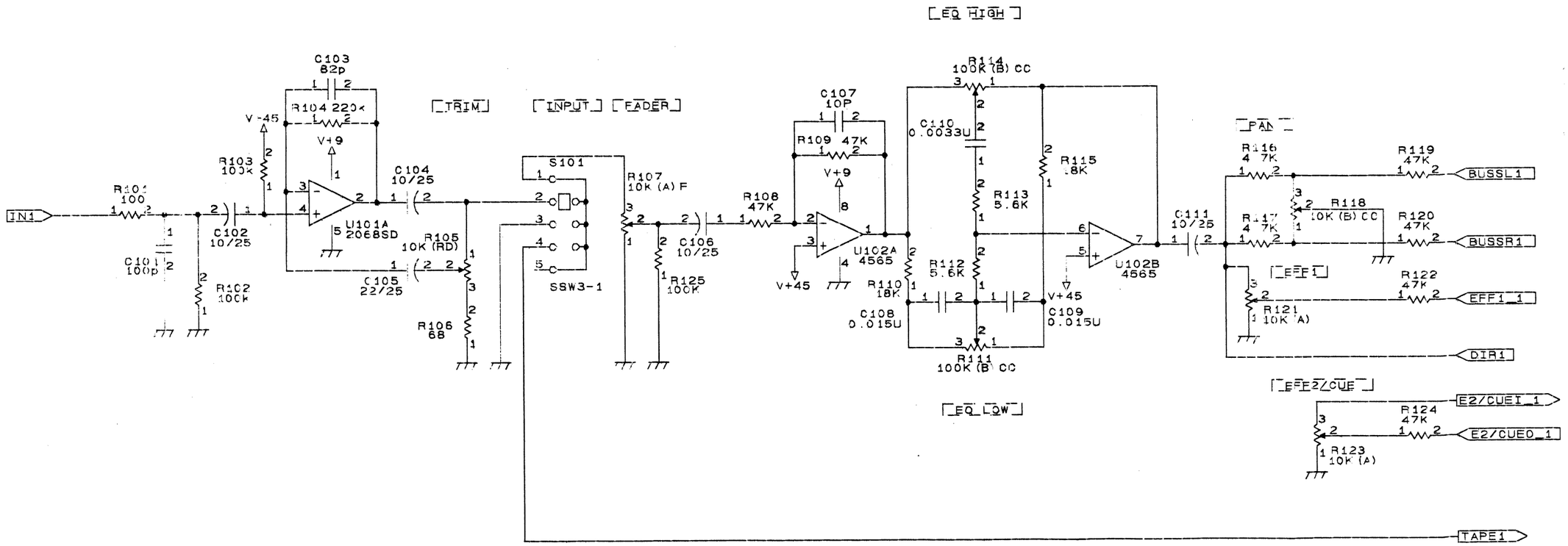

JUMPER B PCB
E2/CUEI 1
R1
GND
DIR1
TAPE1
E2/CUEI 2
R2
DIR2
TAPE2
E2/CUEI 3
R3
DIR3
TAPE3
T1
D1
C1
E1
T2
D2
C2
E2
T3
D3
C3
E3
J101 MIC/LINE1
J201 MIC/LINE2
J301 MIC/LINE3
J401 MIC/LINE4
J501 5-6ST.INPUT
J701 7-8ST.INPUT
J151A SUBIN
J152A LINEOUT
J153A MONOUT
J154 PHONES
J155 EFF1
J156 EFF2/CUE
J157 PUNCHI/O
J158 SYNCOUT
R PCBASSY


CH1
CH2
CH3
CH4
J101
J201
J301
J401
MIC/LINE1
MIC/LINE2
MIC/LINE3
MIC/LINE4
IN1
IN2
IN3
IN4
P101
P102
P201
P202
P301
P302
P501
P502
BUSSL1
BUSSR1
EFF1_1
E2/QUEO_1
E2/QUEI_1
DIR1
TAPE1
BUSSL2
BUSSR2
EFF1_2
E2/QUEO_2
E2/QUEI_2
DIR2
TAPE2
BUSSL3
BUSSR3
EFF1_3
E2/QUEO_3
E2/QUEI_3
DIR3
TAPE3
BUSSL
BUSSR
EFF1
DIR4
E2/QUE
TAPE4
V1
V2
V3
V4
GND
S102A
S102B
S102C
S161A
S161B
R151 120K
C152 10P
C153 10/25
U151A 4565
R152A 10K (A) 2F
R251 120K
C252 10P
C253 10/25
U251A 4565
R252B 10K (A) 2F
C151 10/25
Q251 10/25
V+9
V+45
MASTER F
R163 47K
C163 10P
C161 10/25
Q164 10/25
U152A 4565
R161 100K
R162 4.7K
C162 4.7/50
R263 47K
C263 10P
C261 10/25
Q264 10/25
U152B 4565
R261 100K
R262 4.7K
C262 4.7/50
REQ FUNCTION
R190
10K
DIRE
SAFE
LEFT
R185 4.7K
R186 13K
V+L
U185
U285
LB1423N
D185 +6
D186 +3
D187 0
D188 -5
D189 -10
Q185 10/25
Q285 10/25
R187 10K
D190
TR1
R188 1K
ST. INPUT 5-6
ST. INPUT 7-8
R501A 10K (A) 2
R501B 10K (A) 2
R502 75K
R701A 10K (A) 2
R701B 10K (A) 2
R702 75K
J501
J701
CH5-6
CH7-8
J151A
SUBIN
R902 180K
R901 10K
R952 180K
R951 10K

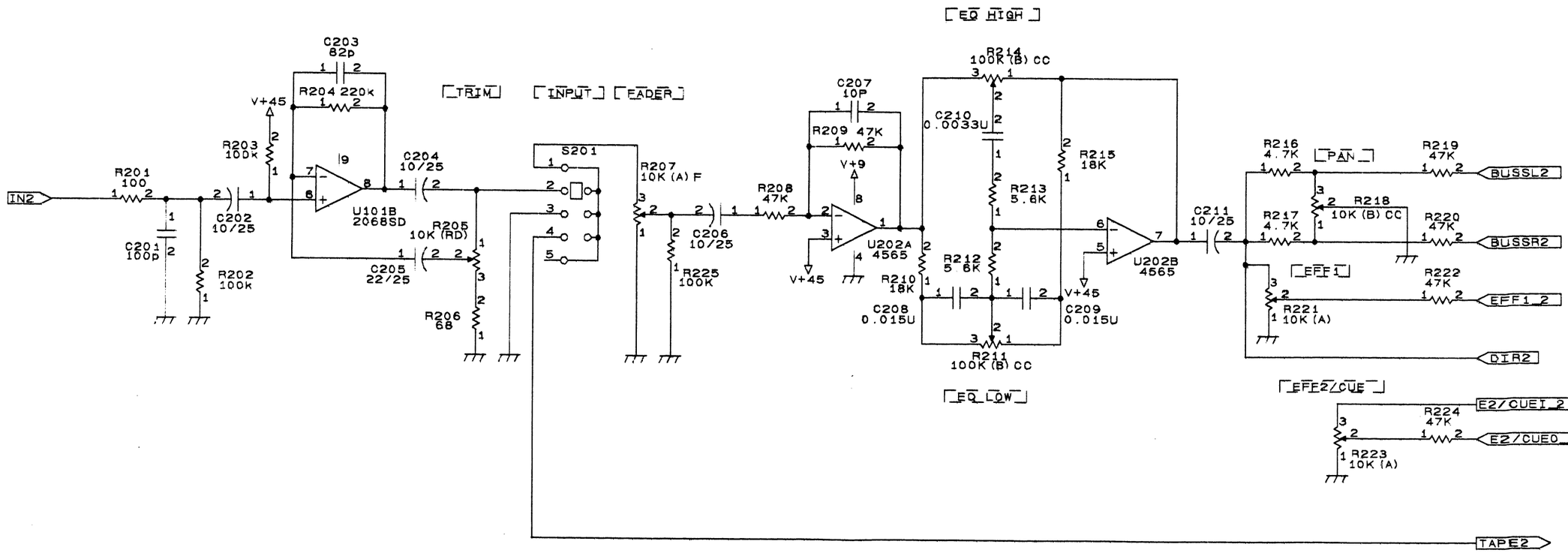

MASTER FADER
MONITOR SEL
MONITOR
REQ FUNCTION
ZERO RET. SW
R151 120K
C151 10/25
C152 10P
C153 10/25
U151A 4565
R152A 10K (A) 2F
R159 100K
C154 10/25
R153 47K
R154 180K
C155 10P
Q156 10/25
R155 100
R156 1.3K
R157 1.2K
U151B 4565
R251 120K
C252 10P
Q251 10/25
C253 10/25
U251A 4565
R152B 10K (A) 2F
R259 100K
C254 10/25
R253 47K
R254 180K
C255 10P
Q256 10/25
R255 100
R256 1.3K
R257 1.2K
U251B 4565
R163 47K
C163 10P
C161 10/25
Q164 10/25
U152A 4565
R161 100K
R162 4.7K
C162 4.7/50
R263 47K
C263 10P
Q261 10/25
Q264 10/25
U152B 4565
R261 100K
R262 4.7K
C262 4.7/50
S152A
S152B
S153A
S153B
S154A
S154B
R191 10K
R291 10K
R192 10K
R292 10K
R193 10K
R293 10K
Q171 DTC314TS
Q271 DTC314TS
R172A 10K (A) 2
R172B 10K (A) 2
D601 1SS133
D602 1SS133
C171 10/25
R173 100K
R174 5.6K
R175 68K
C173 22P
R178 2.2
U153A LA6515
C172 4.7/50
R158 100K
C50 220/16
C174 220/16
R177 2.2
C175 0.1U
C176 100P
R178 1.5K
R179 1K
R275 68K
C273 22P
U153B LA6515
C271 10/25
R273 100K
R274 5.6K
R276 2.2
C272 4.7/50
R258 100K
C274 220/16
R277 2.2
C275 0.1U
C276 100P
R278 1.5K
R279 1K
R50 15 (NF)
R165 100
R164 100K
R265 100
R264 100K
Q151 DTC314T
Q152 DTC314T
Q153 DTC314T
Q154 DTC314T
S162
SYNC ON
OFF
S163B
S163A
D501 ZERO
S102A
S102B
S102C
D1 2
T1 3
E1
D2 5
T2 6
E2
D3 8
T3 9
E3
R4
S161A
S161B
S261A
S261B
S361A
S361B
S461A
S461B
DIRE
SAFE
LEFT
RIGH
R190 10K
R290 10K
R390 10K
R490 10K
R185 4.7K
R186 13K
R285 4.7K
R286 13K
R385 4.7K
R386 13K
R485 4.7K
R486 13K
U185
U285
U385
U485
LB1423N
D186 +8
D186 +3
D187 0
D188 -5
D189 -10
D286 +8
D286 +3
D287 0
D288 -5
D289 -10
D386 +8
D386 +3
D387 0
D388 -5
D389 -10
D486 +8
D486 +3
D487 0
D488 -5
D489 -10
R187 10K
R287 10K
R387 10K
R487 10K
C185 10/25
C285 10/25
C385 10/25
C485 10/25
R188 1K
R288 1K
R388 1K
R488 1K
D190 TR1
D290 TR2
D390 TR3
D490 TR4
V+9
V+45
V+L
R61 1.8K
D60 POWER
C1 220/16
C3 0.022U
C158 0.022U
C4 0.022U
C2 220/16
Q55 DTA124ES
Q51 DTC124ES
Q52 0.022U
C60 47/16
C61 100/16
R60 100K
C1
C2
C3
R4
T1
T2
T3
T4

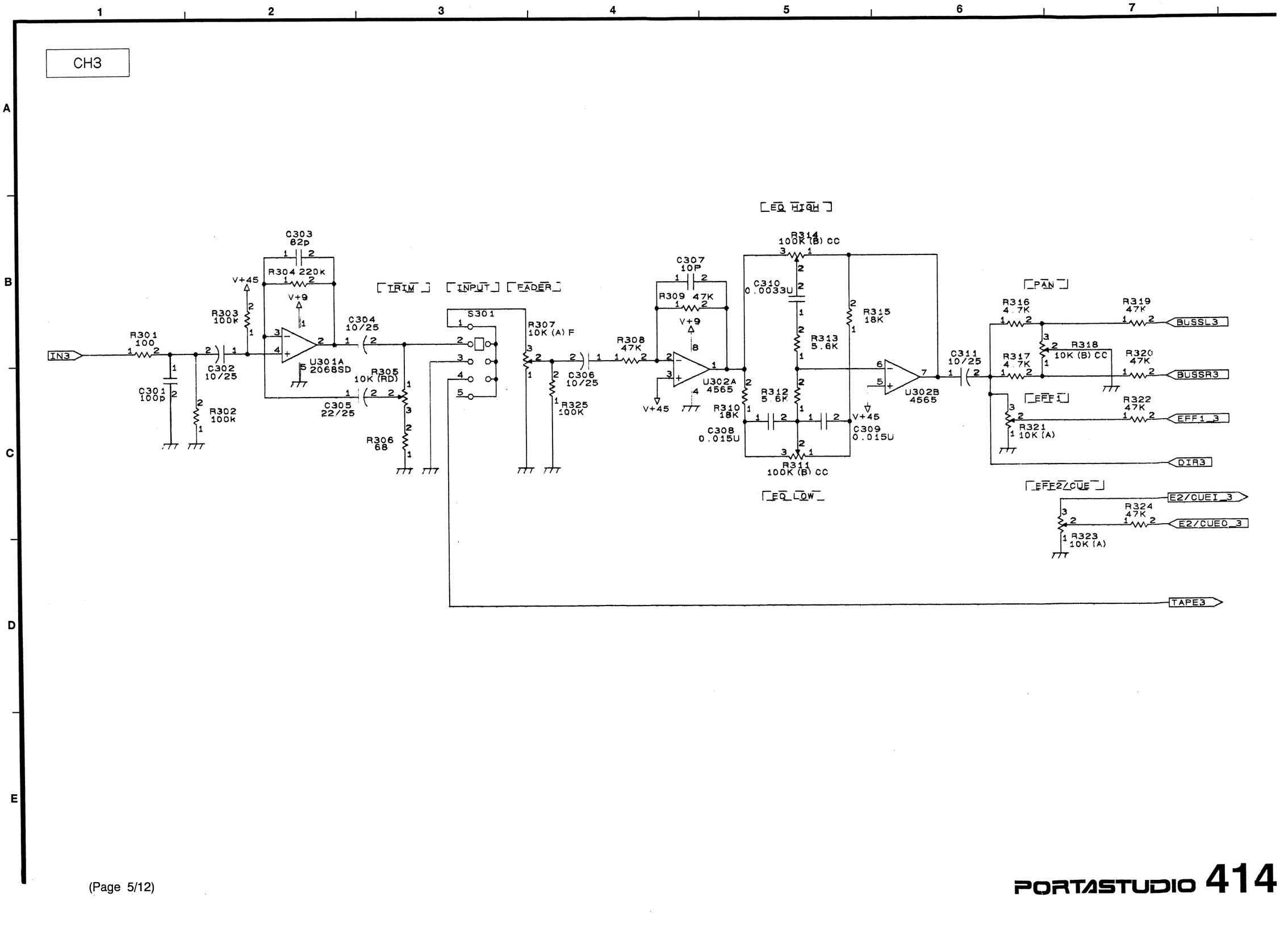

R154 180K
C155 10P
C154 10/25
R153 47K
R159 100K
U151B 4565
V+45
C156 10/25
R155 100
R156 1.3K
R157 1.2K
R254 180K
C255 10P
C254 10/25
R253 47K
R259 100K
U251B 4565
C256 10/25
R255 100
R256 1.3K
R257 1.2K
MONITOR SEL.
S152A
S152B
S153A
S153B
S154A
S154B
R191 10K
R291 10K
R192 10K
R292 10K
R193 10K
R293 10K
Q171 DTC314TS
Q271 DTC314TS
D601 1SS133
D602 1SS133
MONITOR
R172A 10K (A) 2
R172B 10K (A) 2
C171 10/25
R173 100K
R158 100K
R174 5.6K
C172 4.7/50
R175 68K
C173 22P
R176 2.2
U153A LA6515
C174 220/16
R177 2.2
C175 0.1U
R178 1.8K
C176 100P
R179 1K
R50 15 (NF)
C50 220/16
R275 68K
C273 22P
U153B LA6515
C271 10/25
R273 100K
R258 100K
R274 5.6K
C272 4.7/50
R276 2.2
R277 2.2
C275 0.1U
R278 1.8K
C276 100P
R279 1K
V+9
R166 100
R164 100K
R265 100
R264 100K
J152A
Q151 DTC314TS
LINEOUT
J153A
Q153 DTC314TS
MONOUT
Q154 DTC314TS
J154
PHONES
J155
EFF1&END
J156
EFF2/CUE
J157
PUNCHI/O
J158 SYNC
S162
SYNC
ON
OFF
db< SW
S163B
S163A
D501 ZERO
ZERO RET. SW
+4.5V
LEDREC
ZEROLV
LEDZERO
PUNCHI/O+
PUNCHI/O-
db<I/O
SYNCI/O
ZERORET (COM)
ZERORET-
+9V
GND
POWERMUTE
BIN14P
S261A
S261B
S361A
S361B
S461A
S461B
DIRE
SAFE
RIGH
LEFT
R396 10K
R490 10K
R285 4.7K
R286 13K
R385 4.7K
R386 13K
R485 4.7K
R486 13K
V+L
U385
U485
LB1423N
D285 +6
D286 +3
D287 0
D288 -5
D289 -10
D385 +6
D386 +3
D387 0
D388 -5
D389 -10
D485 +6
D486 +3
D487 0
D488 -5
D489 -10
R287 10K
R387 10K
R487 10K
C385 10/25
C485 10/25
D290 TR2
D390 TR3
D490 TR4
R388 1K
R488 1K
R61 1.8K
D60 POWER
C1 220/16
C3 0.022U
D188 0.022U
C4 0.022U
C2 220/16
Q50 DTA124ES
Q51 DTC124ES
R60 100K
C50 47/16
Q62 0.022U
C61 100/16
C1
C2
C3
R4
I1
I2
I3
I4
RECSIG1
RECSIG2
RECSIG3
RECSIG4
TAPEOUT1
TAPEOUT2
TAPEOUT3
TAPEOUT4
BIN8P

CH1

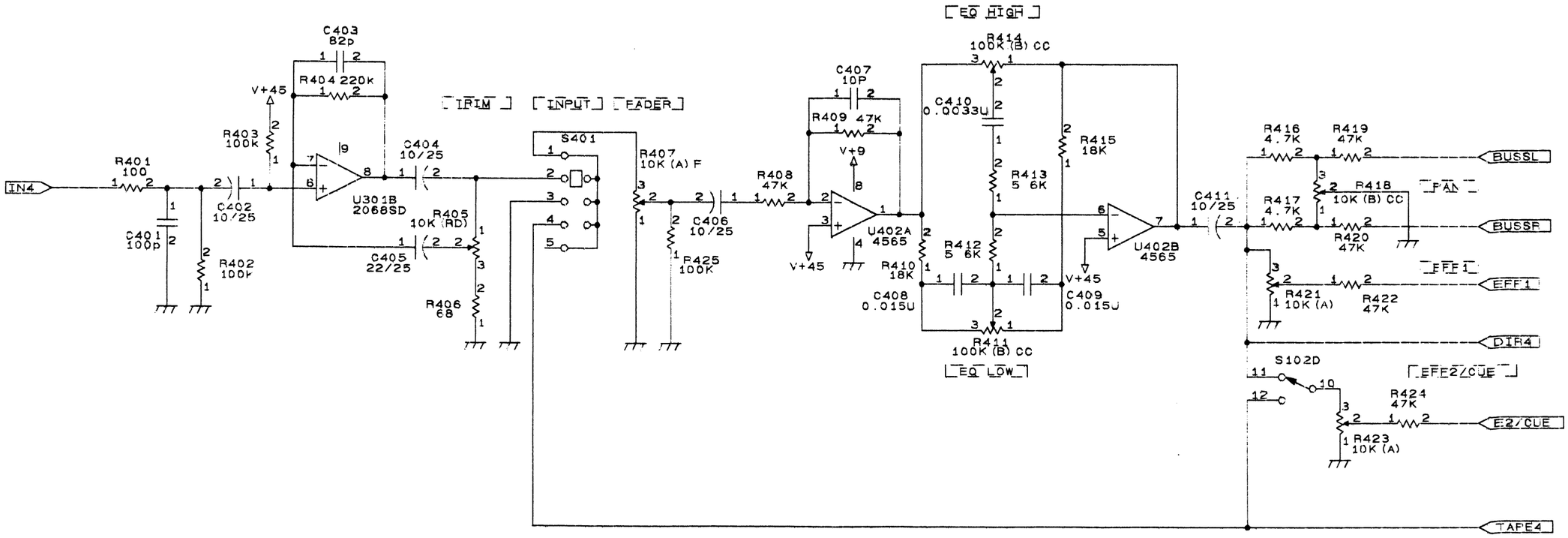

[EQ HIGH]
C103 82p
R104 220K
[TRIM]
[INPUT]
[FADER]
V-45
V+9
R103 100K
C104 10/25
S101
R107 10K (A) F
IN1
R101 100
C102 10/25
U101A 2068SD
C101 100p
R102 100K
C105 22/25
R105 10K (RD)
R106 68
SSW3-1
R108 47K
C106 10/25
R125 100K
C107 10P
R109 47K
R114 100K (B) CC
C110 0.0033U
R113 5.6K
R115 8K
U102A 4565
R110 18K
R112 5.6K
C108 0.015U
C109 0.015U
R111 100K (B) CC
V+45
U102B 4565
[EQ LOW]
[PAN]
C111 10/25
R116 4.7K
R119 47K
R118 10K (B) CC
R117 4.7K
R120 47K
BUSSL1
BUSSR1
[EFF1]
R122 47K
R121 10K (A)
EFF1_1
DIR1
[EFF2/CUE]
E2/CUEI_1
R124 47K
E2/CUEO_1
R123 10K (A)
TAPE1

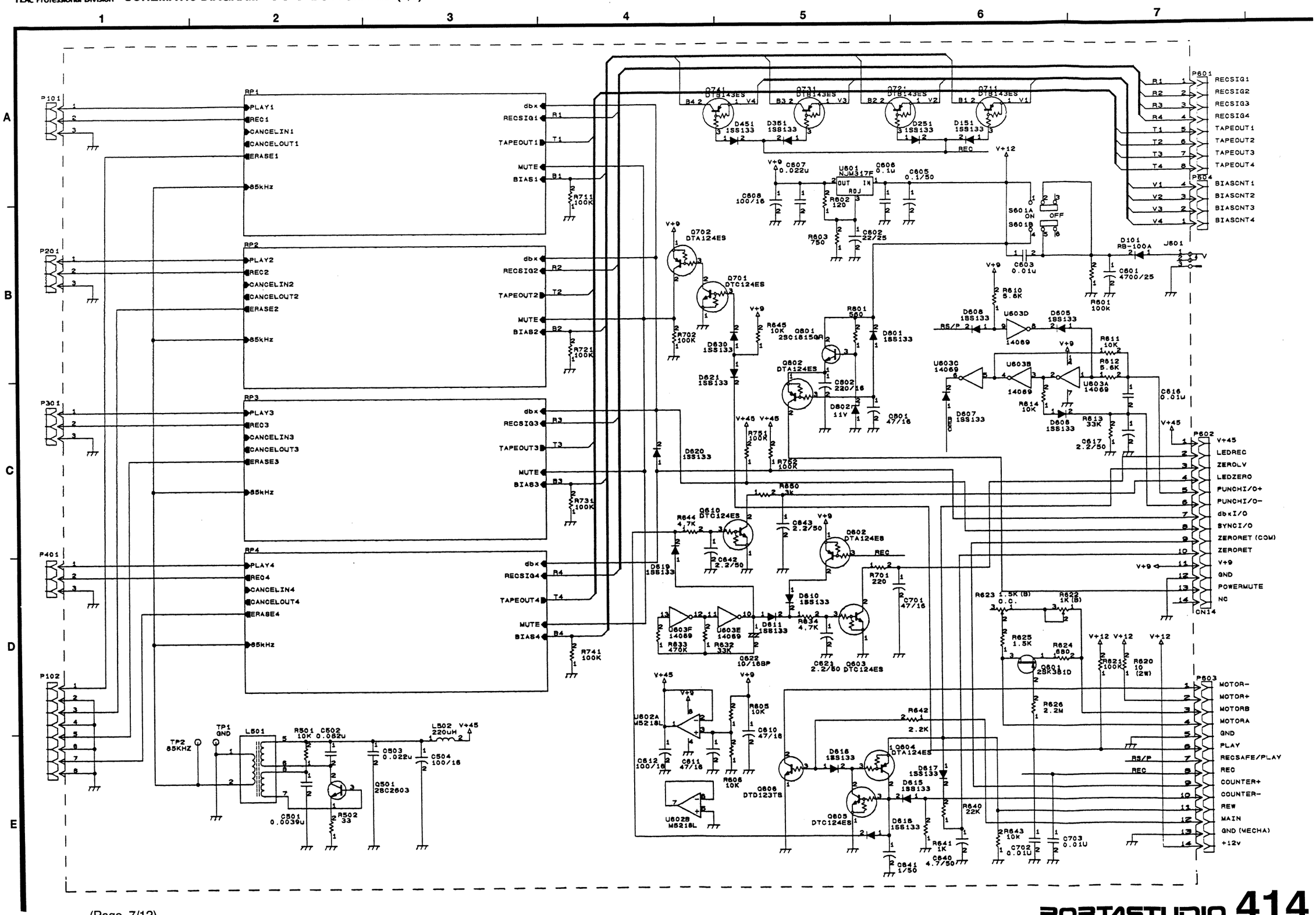
CH2


IN2
R201 100
C201 100p
C202 10/25
R202 100K
C203 82p
R204 220K
V+45
R203 100K
U101B 2068SD
C204 10/25
R205 10K (RD)
C205 22/25
R206 68
[TRIM]
[INPUT]
[FADER]
S201
R207 10K (A) F
C206 10/25
R225 100K
R208 47K
[EQ HIGH]
C207 10P
R209 47K
V+9
U202A 4565
V+45
R214 100K (B) CC
C210 0.0033U
R215 18K
R213 5.6K
R212 5.6K
R210 18K
C208 0.015U
C209 0.015U
R211 100K (B) CC
[EQ LOW]
U202B 4565
C211 10/25
R216 4.7K
[PAN]
R219 47K
BUSSL2
R218 10K (B) CC
R217 4.7K
R220 47K
BUSSR2
[EFF1]
R222 47K
EFF1_2
R221 10K (A)
DIR2
[EFF2/CUE]
E2/CUEI_2
R224 47K
E2/CUEO_2
R223 10K (A)
TAPE2

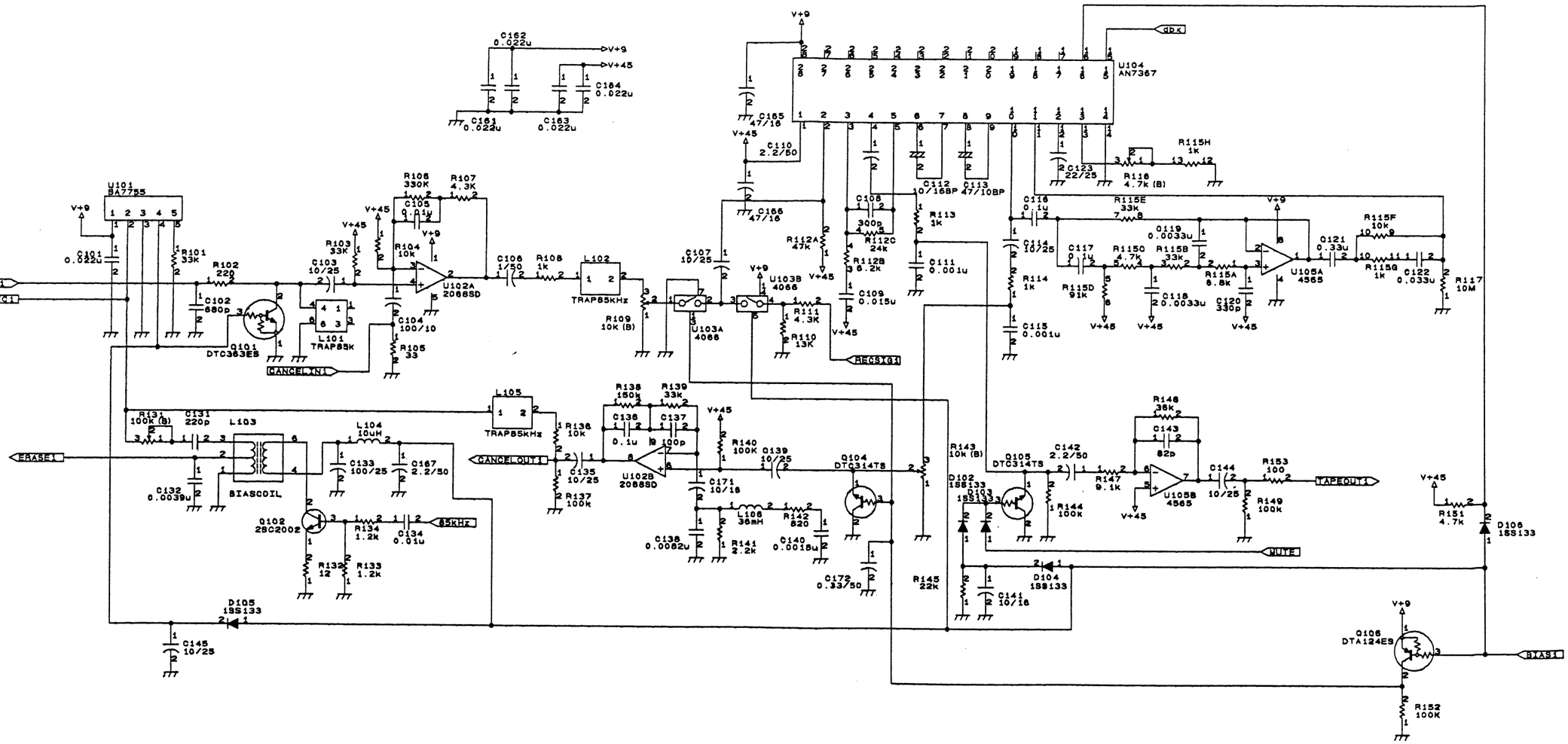

CH3
IN3
R301 100
C301 100p
C302 10/25
R302 100k
R303 100k
V+45
C303 82p
R304 220k
V+9
U301A 2068SD
C304 10/25
C305 22/25
R305 10K (RD)
R306 68
[TRIM]
[INPUT]
[FADER]
S301
R307 10K (A) F
C306 10/25
R325 100K
R308 47K
[EQ HIGH]
C307 10P
R309 47K
U302A 4565
V+45
R310 18K
C308 0.015U
R311 100K (B) CC
C309 0.015U
R312 5.6K
R313 5.6K
C310 0.0033U
R314 100K (B) CC
R315 18K
U302B 4565
C311 10/25
[PAN]
R316 4.7K
R317 4.7K
R318 10K (B) CC
R319 47K
R320 47K
R321 10K (A)
R322 47K
BUSSL3
BUSSR3
[EFF1]
EFF1_3
DIR3
[EFF2/CUE]
R324 47K
R323 10K (A)
E2/CUEI_3
E2/CUEO_3
[EQ LOW]
TAPE3

CH4

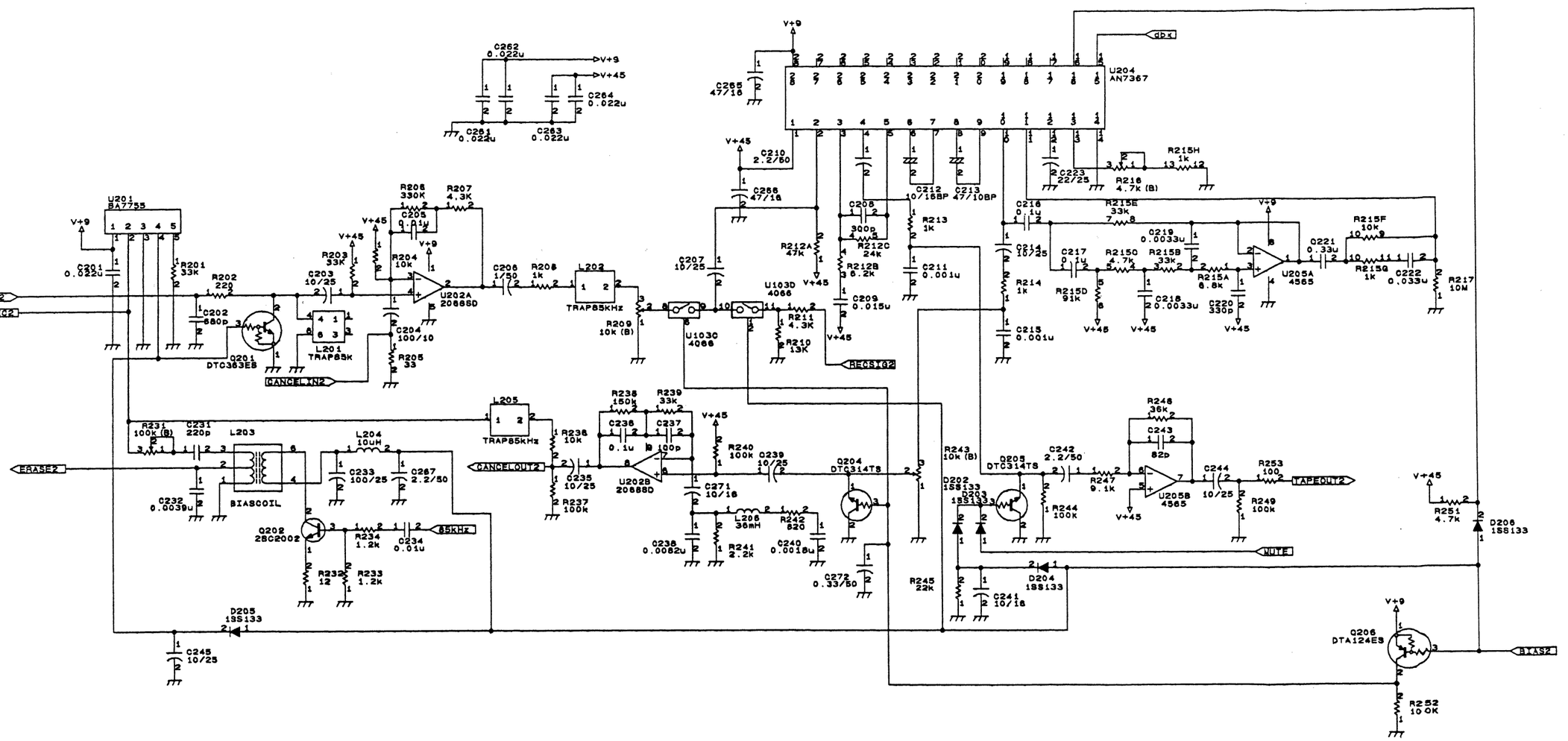

IN4
R401 100
C401 100p
R402 100K
C402 10/25
C403 82p
R404 220K
V+45
R403 100K
U301B 2068SD
C404 10/25
C405 22/25
R405 10K (RD)
R406 68
TRIM
INPUT
FADER
S401
R407 10K (A) F
C406 10/25
R425 100K
EQ HIGH
R414 100K (B) CC
C407 10P
R409 47K
V+9
C410 0.0033U
R408 47K
U402A 4565
R413 5 6K
R415 18K
R412 5 6K
R410 18K
C408 0.015U
C409 0.015U
R411 100K (B) CC
EQ LOW
U402B 4565
C411 10/25
R416 4.7K
R419 47K
R418 10K (B) CC
PAN
R417 4.7K
R420 47K
BUSSL
BUSSR
EFF1
R421 10K (A)
R422 47K
DIR4
S102D
EFF2/CUE
R424 47K
R423 10K (A)
E2/CUE
TAPE4


1
2
3
4
5
6
7
A
B
C
D
E
P101
P201
P301
P401
P102
RP1
PLAY1
REC1
CANCELIN1
CANCELOUT1
ERASE1
85kHz
dbx
RECSIG1
TAPEOUT1
MUTE
BIAS1
RP2
PLAY2
REC2
CANCELIN2
CANCELOUT2
ERASE2
RECSIG2
TAPEOUT2
BIAS2
RP3
PLAY3
REC3
CANCELIN3
CANCELOUT3
ERASE3
RECSIG3
TAPEOUT3
BIAS3
RP4
PLAY4
REC4
CANCELIN4
CANCELOUT4
ERASE4
RECSIG4
TAPEOUT4
BIAS4
TP1 GND
TP2 85KHZ
L501
R501 10K
C502 0.082u
C503 0.022u
C504 100/16
L502 220uH
V+45
Q501 2SC2603
C501 0.0039u
R502 33
Q741 DTB143ES
Q731 DTB143ES
Q721 DTB143ES
Q711 DTB143ES
D451 1SS133
D351 1SS133
D251 1SS133
D151 1SS133
REC
V+12
V+9
C607 0.022u
U601 NJM317F
C606 0.1u
C605 0.1/50
C608 100/16
R602 120
R603 750
C602 22/25
S601A ON OFF
S601B
D101 RB-100A
J601
C603 0.01u
C601 4700/25
R601 100k
R610 5.6K
Q702 DTA124ES
Q701 DTC124ES
R702 100K
R645 10K
D630 1SS133
D621 1SS133
R601 560
Q801 2SC1815GR
D801 1SS133
Q802 DTA124ES
C802 220/16
D802 11V
C801 47/16
D608 1SS133
U603D 14069
D605 1SS133
R611 10K
R612 5.6K
U603C 14069
U603B 14069
U603A 14069
R614 10K
R613 33K
C617 2.2/50
C618 0.01u
D607 1SS133
R751 100K
R752 100K
R750 3k
D620 1SS133
Q610 DTC124ES
R644 4.7K
C643 2.2/50
C642 2.2/50
D619 1SS133
Q602 DTA124ES
R701 220
C701 47/16
D610 1SS133
D611 1SS133
U603F 14069
U603E 14069
R633 470K
R632 33K
C622 10/16SP
R634 4.7K
C621 2.2/50
Q603 DTC124ES
R623 1.5K (B) 0.C.
R622 1K (B)
R625 1.5K
R624 680
Q801 2SK381D
R621 100K
R620 10 (2W)
R626 2.2M
U602A M5218L
R605 10K
C610 47/16
C612 100/16
C611 47/16
R606 10K
U602B M5218L
Q606 DTD123TS
Q604 DTA124ES
D616 1SS133
D617 1SS133
D615 1SS133
D618 1SS133
Q605 DTC124ES
R642 2.2K
R640 22K
R641 1K
C640 4.7/50
C641 1/50
R643 10k
C702 0.01U
C703 0.01U
P601
RECSIG1
RECSIG2
RECSIG3
RECSIG4
TAPEOUT1
TAPEOUT2
TAPEOUT3
TAPEOUT4
P604
BIASCNT1
BIASCNT2
BIASCNT3
BIASCNT4
P602
V+45
LEDREC
ZEROLV
LEDZERO
PUNCHI/O+
PUNCHI/O-
dbxI/O
SYNCI/O
ZERORET (COM)
ZERORET
V+9
GND
POWERMUTE
NC
CN14
P603
MOTOR-
MOTOR+
MOTORB
MOTORA
GND
PLAY
RS/P
REC
REC SAFE/PLAY
COUNTER+
COUNTER-
REW
MAIN
GND (MECHA)
+12v

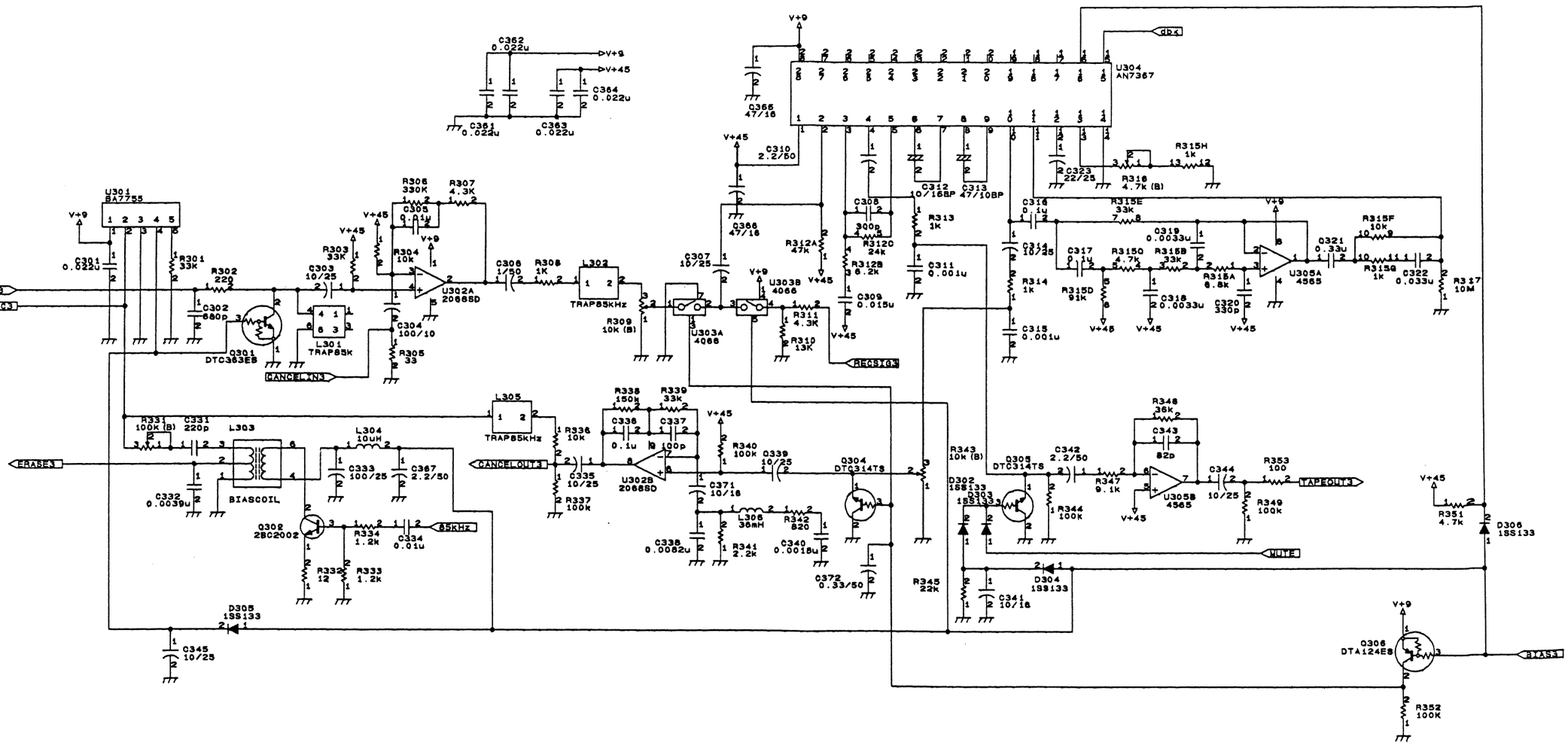
CH1


C162 0.022u
C161 0.022u
C163 0.022u
C164 0.022u
V+9
V+45
U104 AN7367
GRX
C165 47/16
C166 47/16
C110 2.2/50
C112 10/16BP
C113 47/10BP
R115H 1k
C123 22/25
R116 4.7k (B)
U101 BA7755
C101 0.022u
R101 33K
R102 220
C102 680p
Q101 DTC363EB
PLAY1
REC1
CANCEL IN1
R103 33K
C103 10/25
R104 10k
C105 0.01u
R106 330K
R107 4.3K
U102A 2068SD
C106 1/50
R108 1k
L102 TRAP85kHz
R109 10k (B)
C107 10/25
U103A 4066
U103B 4066
R112A 47k
R112B 6.2k
R112C 24k
300p
C108
R113 1k
C111 0.001u
C109 0.015u
R111 4.3K
R110 13K
REC3(G1)
C116 0.1u
C114 10/25
R114 1k
C115 0.001u
R115E 33k
C117 0.1u
R115D 91k
R115O 4.7k
R115B 33k
C118 20.0033u
C119 0.0033u
R115A 8.8k
C120 330p
U105A 4565
C121 0.33u
R115F 10k
R115G 1k
C122 0.033u
R117 10M
L105 TRAP85kHz
R136 10k
C135 10/25
R137 100k
R138 150k
R139 33k
C136 0.1u
C137 100p
U102B 2068SD
R140 100K
C139 10/25
C171 10/16
L106 36mH
R142 820
C138 0.0082u
R141 2.2k
C140 0.0018u
Q104 DTC314TS
C172 0.33/50
R145 22k
R143 10k (B)
R148 36k
C143 82p
C142 2.2/50
Q105 DTC314TS
R147 9.1k
U105B 4565
C144 10/25
R153 100
R149 100k
TAPEOUT1
D102 1SS133
D103 1SS133
R144 100k
D104 1SS133
C141 10/16
MUTE
R131 100k (B)
C131 220p
L103
L104 10uH
C133 100/25
C167 2.2/50
C132 0.0039u
BIASCOIL
ERASE1
Q102 2SC2002
R134 1.2k
C134 0.01u
85kHz
R132 12
R133 1.2k
D105 1SS133
C145 10/25
R151 4.7k
D106 1SS133
Q106 DTA124ES
BIAS1
R152 100K

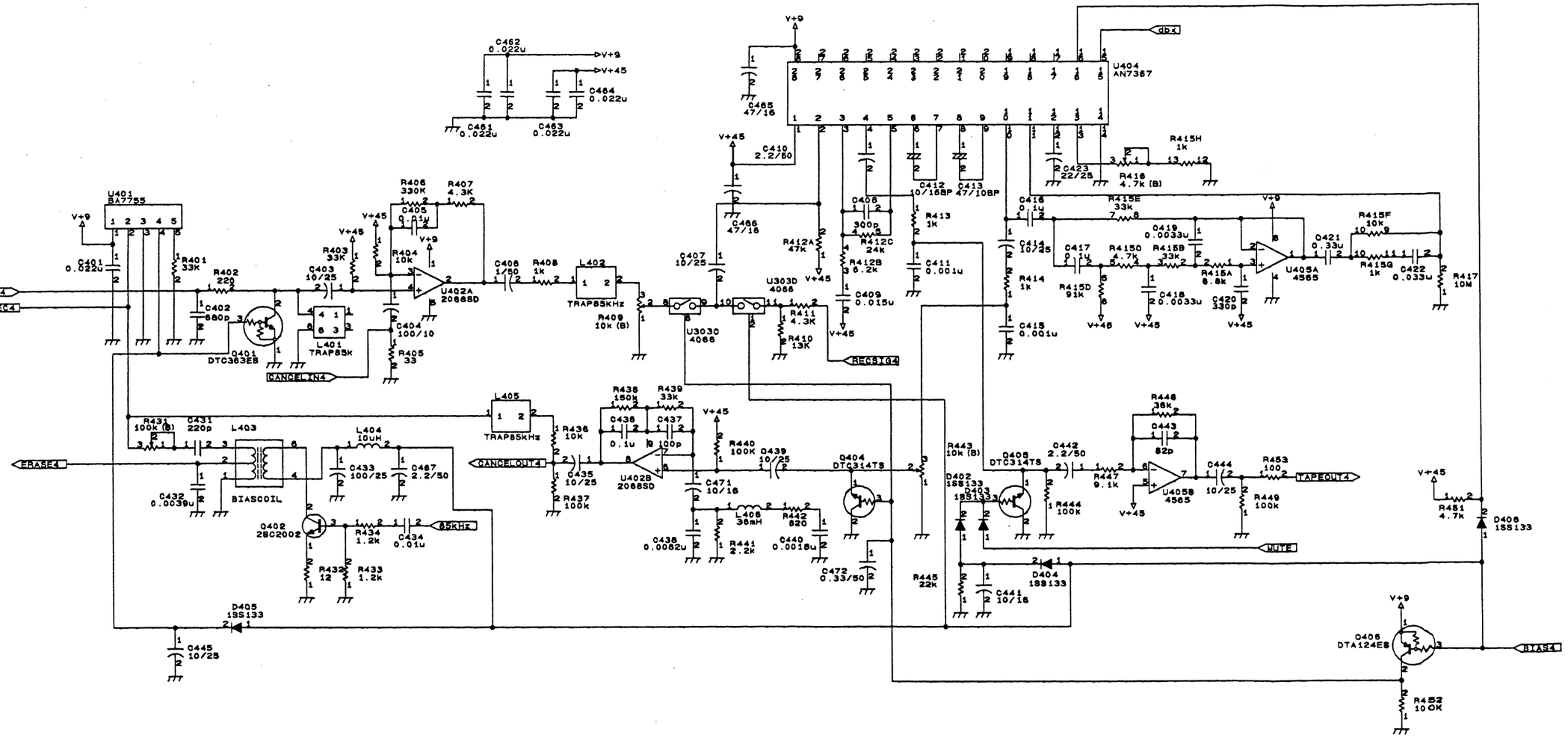
CH2

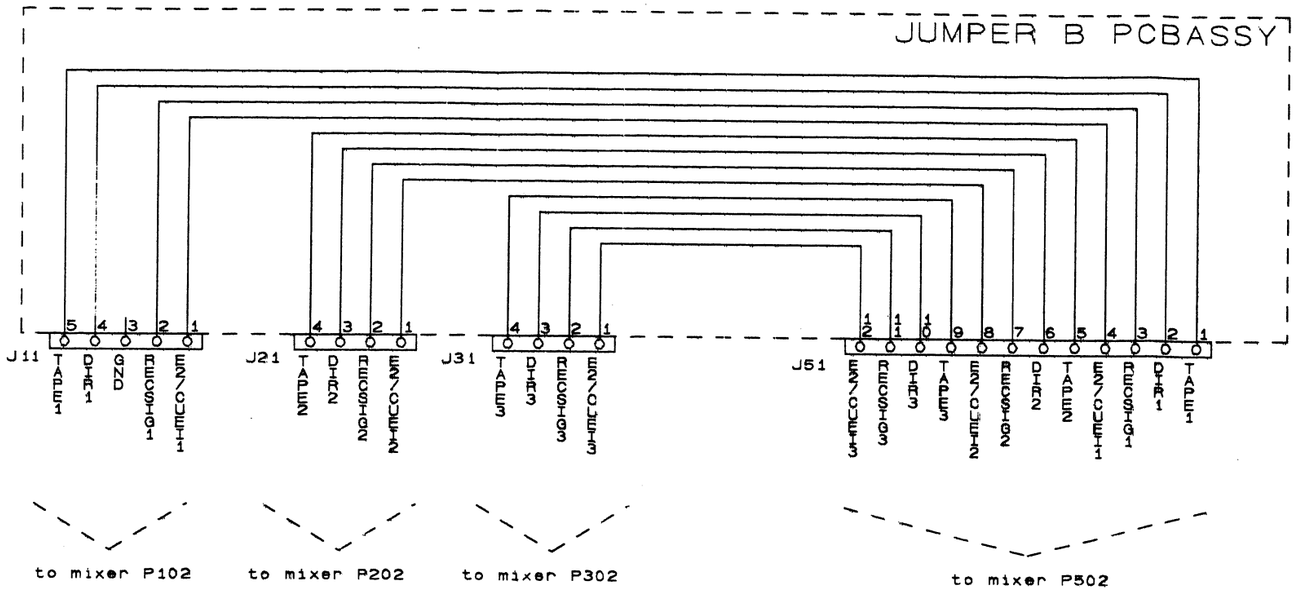

C262 0.022u
C264 0.022u
C261 0.022u
C263 0.022u
V+9
V+45
U204 AN7367
gdx
C265 47/16
C210 2.2/50
C266 47/16
C212 10/16BP
C213 47/10BP
C208 300p
R212A 47K
R212C 24K
R212B 8.2K
C209 0.015u
R213 1K
C211 0.001u
R214 1K
C214 10/25
C215 0.001u
C216 0.1u
R215E 33k
C217 0.1u
R215D 91K
R215O 4.7k
R215B 33k
R215A 6.8k
C218 0.0033u
C219 0.0033u
C220 330p
U205A 4565
C221 0.33u
R215F 10k
R215G 1k
C222 0.033u
R217 10M
R215H 1k
C223 22/25
R216 4.7k (B)
U201 BA7755
C201 0.022u
R201 33K
R202 220
C202 680p
Q201 DTC363ES
L201 TRAP85k
R203 33K
C203 10/25
R204 10k
C204 100/10
R205 33
R206 330K
C205 0.01u
R207 4.3K
U202A 20868D
C206 1/50
R208 1k
L202 TRAP85KHz
R209 10k (B)
U103C 4066
U103D 4066
R211 4.3K
R210 13K
C207 10/25
PLAY2
REC2
CANCELIN2
RECSW2
L205 TRAP85kHz
R238 150k
R239 33k
C236 0.1u
C237 100p
R236 10k
C235 10/25
R237 100k
U202B 20868D
R240 100k
C239 10/25
C271 10/16
L206 36mH
R242 820
C238 0.0082u
R241 2.2k
C240 0.0018u
C272 0.33/50
Q204 DTC314TS
R245 22k
R231 100k (B)
C231 220p
L203
L204 10uH
C233 100/25
C267 2.2/50
C232 0.0039u
BIASCOIL
Q202 2SC2002
R234 1.2k
C234 0.01u
R232 12
R233 1.2k
85KHz
ERASE2
D205 1SS133
C245 10/25
R243 10k (B)
Q205 DTC314TS
D202 1SS133
Q203 1SS133
C242 2.2/50
R247 9.1k
R244 100K
R248 36k
C243 82p
U205B 4565
C244 10/25
R253 100
R249 100k
TAPEOUT2
MUTE
D204 1SS133
C241 10/16
R251 4.7k
D206 1SS133
BIAS2
Q206 DTA124ES
R252 10.0K

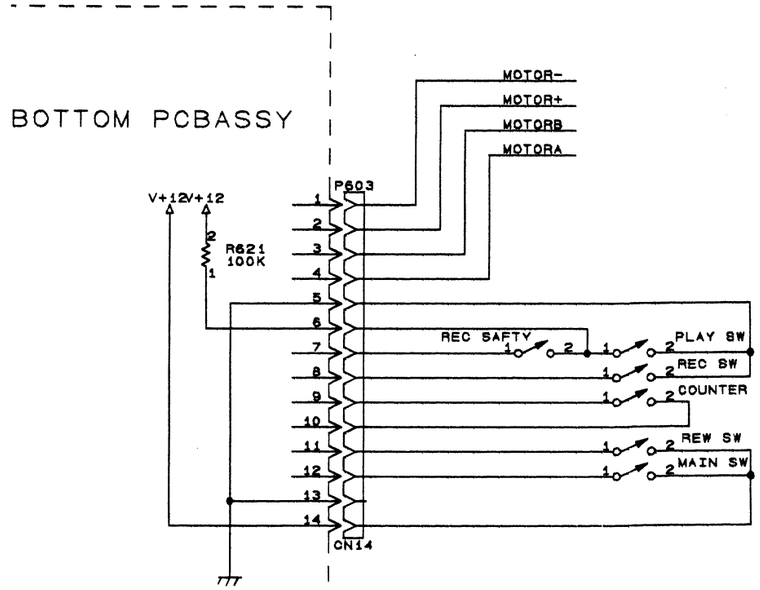
CH3

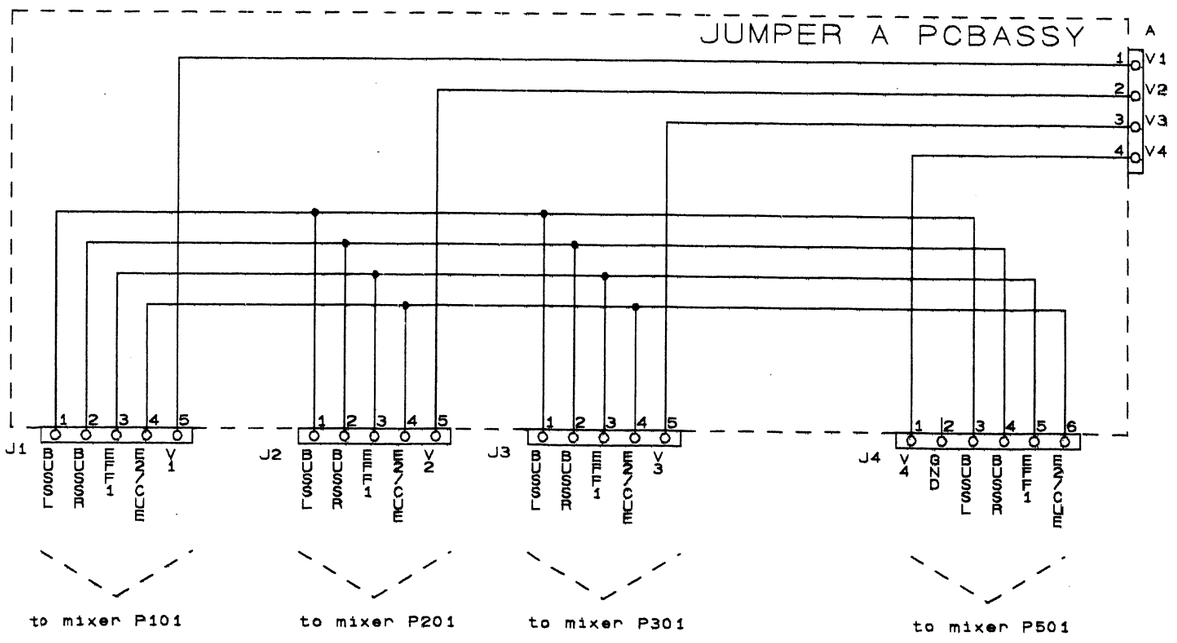

U301 BA7755
U302A 2068SD
U302B 2068SD
U303A 4066
U303B 4066
U304 AN7367
U305A 4565
U305B 4565
Q301 DTC363ES
Q302 2SC2002
Q303 DTC314TS
Q304 DTC314TS
Q305 DTC314TS
Q306 DTA124ES
L301 TRAP85K
L302 TRAP85KHz
L303 BIASCOIL
L304 10uH
L305 TRAP85KHz
L306 36mH
PLAY3
REC3
CANCEL.XN3
ERASE3
CANCELOUT3
REC3TO3
TAPEOUT3
MUTE
BIAS3
85KHz
V+9
V+45

CH4


U401 BA7755
U402A 2068SD
U402B 2068SD
U303D 4066
U3030 4066
U404 AN7367
U405A 4565
U405B 4565
Q401 DTC363EB
Q402 2SC2002
Q404 DTC314TS
Q405 DTC314TS
Q406 DTA124ES
L401 TRAP85K
L402 TRAP85KHz
L403 BIASCOIL
L404 10uH
L405 TRAP85KHz
L406 36mH
D402 1SS133
D403 1SS133
D404 1SS133
D405 1SS133
D406 1SS133
PLAY4
REC4
CANCELIN4
ERASE4
CANCELOUT4
REC81G4
TAPEOUT4
MUTE
BIAS4
85KHz
V+9
V+45


JUMPER B PCBASSY
J11
TAPE1
DIR1
GND
REGSHG1
ENCCMD1
J21
TAPE2
DIR2
REGSHG2
ENCCMD2
J31
TAPE3
DIR3
REGSHG3
ENCCMD3
J51
ENCCMD3
REGSHG3
DIR3
TAPE3
ENCCMD2
REGSHG2
DIR2
TAPE2
ENCCMD1
REGSHG1
DIR1
TAPE1
to mixer P102
to mixer P202
to mixer P302
to mixer P502


BOTTOM PCBASSY
MOTOR-
MOTOR+
MOTORB
MOTORA
V+12V+12
R621
100K
P603
CN14
REC SAFTY
PLAY SW
REC SW
COUNTER
REW SW
MAIN SW


JUMPER A PCBASSY
A
V1
V2
V3
V4
J1
J2
J3
J4
to mixer P101
to mixer P201
to mixer P301
to mixer P501